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ABSTRACT

Two research studies (the first involving five mildly mentally handicapped kindergarteners, the second, twelve elementary aged handicapped children) were conducted to examine the effects of peer teachers on the implementation of individual education programs and to determine whether the skills learned in one educational setting would generalize to a second educational setting. Ss in Study Series I were mainstreamed into the regular classroom and taught letter recognition by kindergarten children from the peer group. Results indicated that handicapped children could make significant progress when given additional help from peer teachers utilizing the instructional implementation plans. Further, it was concluded that the skills learned in the regular class setting generalized to the special class setting. Twelve case studies in Study Series II were used to examine teacher-to-student instruction versus student-to-student instruction in the regular classroom. The results indicated no consistent or definitive differences between teacher and student instruction on either correct or error responses. Graphic illustrations present statistical data from the studies. (Author/SBH)

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FINAL REPORT

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Project Number: 443AH80006

Grant Number: G007800001

Rita J. Sherbenou
Corrine A. McGuigan

with faculty advisors

A. Lee Parks, Ph.D.
Dale Gentry, Ph.D.

University of Idaho
Moscow, Idaho

April 1979

THE EFFECTS OF STUDENT ASSISTANTS ON THE IMPLEMENTATION OF INDIVIDUAL EDUCATION PROGRAMS

April 1979

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

BUREAU OF EDUCATION FOR THE HANDICAPPED

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ABSTRACT

Two research studies were conducted to examine the effects of peer teachers on the implementation of individual education programs. A second general purpose of the studies was to determine whether the skills learned in one educational setting would generalize to a second educational setting. A single subject design for applied settings was the design chosen for these studies.

Study Series I was conducted with five mildly mentally handicapped kindergarteners who were mainstreamed into the regular classroom and taught letter recognition by kindergarten children from the peer group. The results of the study indicated that handicapped children could make significant progress when given additional help from peer teachers utilizing the IIPs. Further, it was concluded that the skills learned in the regular class setting generalized to the special class setting.

Study Series II consisted of twelve case studies with elementary aged handicapped children who were mainstreamed into the regular classroom. Teacher-to-student instruction versus student-to-student instruction was the variable examined in the twelve studies. The results indicated no consistent or definitive differences between teacher and student instruction on either correct or error responses. Teacher and student instruction were both shown to be effective in several studies. In other studies the two types of instruction were shown to have no effect or a negative effect. Generalization of skills was found in the four studies which examined this issue. Skills learned in one setting were transferred to a second setting.

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The research reported herein was made possible by a grant from the United States Office of Education, Bureau of Education for the Handicapped, Washington, D.C. The material herein does not necessarily reflect the position of the funding agency and no inference should be made to that effect.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

Bureau of Education for the Handicapped

PREFACE

As with most human endeavors, the research studies reported herein were not totally the efforts of a few people. A great deal of praise and acknowledgement must go to the faculty advisors, Dr. A. Lee Parks and Dr. Dale Gentry, who assisted in the studies. Their guidance was ever gentle and wise.

We would like to express our appreciation to the public schools of Moscow and Coeur d'Alene, Idaho, for their cooperation in providing the settings for the studies. Appreciation is also expressed to the children and teachers for their daily participation in the projects.

It is impossible to individually thank those friends and colleagues who encouraged us when we lost our perspective and bought one-way tickets out of town. To them, we can only say a very inadequate "Thank You."

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THE FINAL REPORT OF THE
EFFECTS OF STUDENT ASSISTANTS ON
THE IMPLEMENTATION OF INDIVIDUAL EDUCATION PROGRAMS

AN INTRODUCTION

During the past ten years there has been a significant increase in concern for proper educational opportunities for the handicapped. Handicapped students and their parents or guardians have demanded the right of equal education. Court decisions such as Wyatt v. Stickney, 1972, and Pennsylvania Association for Retarded Citizens v. Commonwealth of Pennsylvania, 1972, have established precedents for legislation to protect the rights of handicapped people.

The Education for All Handicapped Children Act, also known as Public Law 94-142, provides for the education of handicapped children in the least restrictive environment; that is, as close to their normal peers as possible. Mainstreaming is the popular term for this. Idaho law requires and individual education plan (IEP) and an instructional implementation plan (IIP) for all children placed in a special education program.

The requirements of P.L. 94-142 (1975) have placed increased demands upon state and local education agencies. Some of these requirements are:

- individual states must develop a state plan for implementing the provisions of this law;
- local school districts must provide educational environments suitable to the needs of handicapped children within the district's boundaries; and
- each school must establish child study teams to evaluate children referred for special services and to develop individual education plans for all children placed in special programs.

But, perhaps the greatest responsibility for implementing IEPs and IIPs lies with the teacher. She or he must provide and implement a detailed, individual program for each handicapped child. Frequently, this requires a considerable amount of the teacher's time before, during and after the school day.

The challenge facing educators is not only how to provide a program for handicapped children within the regular classroom environment; it is also how to provide the best possible program with the least disruption to the regular classroom. It is imperative that methods be identified for implementing individual programs for handicapped children without placing an additional heavy burden on the regular classroom teacher.

The first purpose of the studies discussed in this report was to investigate the impact of a procedure which might help regular educators efficiently and successfully integrate special learners into regular settings. This purpose was formally addressed and met by conducting the following major studies:

> STUDY SERIES I: *"An investigation of the effects of peer teachers on the implementation of individualized instruction plans for handicapped kindergarteners in regular and special settings."*
>
> and
>
> STUDY SERIES II: *"Investigations of the effects of student instructional assistants on the academic or social behaviors of elementary, handicapped students."*

The second purpose of the studies was to provide an avenue by which the results of well conducted and meaningful applied research could be made available to educators. Not available on just a theoretical level but on a practical and usable level. To this end, this report contains not only the statistical results of the completed research endeavors, but also the specific training procedures for the peer teachers.

THE METHODOLOGY FOR

CONTACTING AND ORIENTING STUDY TEACHERS AND DATA COLLECTORS

GAINING ENTRANCE:
DISTRICT, TEACHER AND PARENT PERMISSIONS

Immediately following formal announcement of the grant award, the research teams began actively securing entrance to previously identified school district, specific teachers and data collection personnel.

The letters on the following pages provide the reader with a sample of the contacts that were established in Mid-February, 1978. Always, these written contacts were followed closely by phone contacts and personal visitations to the sites.

Results of early contacting endeavors were great. In the elementary portion of the studies (Study Series II) more teachers responded than were need to conduct the studies outlined. Those responding and who were selected for participation following two pre-planning and selection meetings included:

- Ms. Betty Cheeley
  Ramsey Elementary School
  Couer d'Alene, Idaho

- Ms. Vicky Sims
  Hayden Lake Elementary School
  Coeur d'Alene, Idaho

- Ms. Lynn Cunningham
  Ramsey Elementary School
  Couer d'Alene, Idaho

- Mr. Mark Ludow
  Ramsey Elementary School
  Couer d'Alene, Idaho

- Ms. Jane Butler
  Ramsey Elementary School
  Couer d'Alene, Idaho

- Ms. Gwen Urbanac
  Hayden Lake Elementary School
  Couer d'Alene, Idaho

- Ms. Linda Knowles
  Hayden Lake Elementary School
  Hayden Lake, Idaho

- Ms. Jean Pittsley
  Hayden Lake Elementary School
  Hayden Lake, Idaho

- Ms. Joy Geuin
  Hayden Lake Elementary School
  Hayden Lake, Idaho

- Ms. Patty Perry
  Ramsey Elementary School
  Couer d'Alene, Idaho

Selected data collectors included:

- Ms. Kim Walseth

- Ms. Mary Huddleston

- Ms. Carlene Clark

- Ms. Ethel Crawford

District approval was granted by:

- District Superintendent of Instruction
  Couer d' Alene School Distrct

  and by the PRINCIPALS OF

- Ramsey Elementary School/ Warren Bakes

  and

- Hayden Lake Elementary School/ Steve Jones

Contact with the personnel of Moscow Public Schools was done through personal interview. The researchers made appointments with the district superintendent and special education director. A meeting was set up with the building principal and the teachers who had been asked to participate. After agreeing to participate, the teachers recommended children to participate in the program.

The parents of the recommended handicapped students were contacted by the teachers and a meeting was arranged for parents, research directors, school personnel and faculty advisors. The results of the meeting were extremely positive and permission to include the children was granted.

The regular classroom teacher recommended children to be peer teachers. She contacted those parents by phone and sent permission slips home to be signed. All parents readily gave permission and the study was on its way.

The following individuals participated in the study:

Ms. Patricia Richardson, Teacher
West Park Elementary
Moscow, Idaho

Ms. Francis Law, Teacher
West Park Elementary
Moscow, Idaho

Ms. Sue Calvert
Data Collector
Moscow, Idaho

District approval was granted by:

Dr. Marshall Keating
Superintendent of Schools
Moscow, Idaho

Dr. Richard Davidson
Special Services Director
Moscow Public Schools
Moscow, Idaho

Ms. Jacqueline Larsen, Principal
West Park Elementary School
Moscow, Idaho

ORIENTATION AND TRAINING

STUDIES SERIES I

Initial training for the teachers and data collector was begun on February, 13, 1978. The first session covered:

1. purpose of the project;
2. goals and objectives; and
3. study design.

In a second session with the teachers and data collector on February 14, 1978, the details of the study were worked out. These consisted of:

1. choosing the target behavior from the IIP for each child;
2. arranging teaching times and place; and
3. arranging the mainstreaming sequence for each child.

Subsequent training sessions for the data collector were held on February 15, 16, and 17. These sessions were used to train observational skills and data collection procedures.

INITIAL TRAINING SEMINAR

STUDY SERIES II

In an attempt to successfully implement and monitor the studies funded by the student-initiated grant from the Bureau of Education for the Handicapped, it was decided by the researcher that all personnel involved in various aspects of the studies should receive a consistent orientation. For this reason, an *INITIAL TRAINING SEMINAR* was designed, prepared and delivered. It included, as the agenda will show, discussions covering:

1. the purpose and scope of the studies
2. the research parameters of the studies
3. student-assistant or "student teacher" selection criteria
4. student-assistant training program
5. study designs for individual students
6. targetting of "pinpoint behaviors"
7. selection of appropriate materials for each student involved in the studies
8. collection of daily data

   and

9. maintenance of daily data (storage).

PARTICIPANTS of the *INITIAL TRAINING SEMINAR* held in Couer d'Alene, Idaho on March 3rd and 4th, 1978 included the following:

1. Regular classroom teachers who were selected to participate in the studies (8)
2. Four data collectors
3. Two special educators and
4. The research staff from the University of Idaho.

See Appendix B for the agenda and material used at the seminar.

THE METHODOLOGY FOR

INSTRUCTING ELEMENTARY STUDENTS
IN THE ART OF INSTRUCTION

TEACHER TO DOS

SESSION 1

- Give the students an overview of the student-to-student program (including training requirements, time, place, etc.)
- Explain individual responsibilities to each student (what they will be teaching, how much time it will take and the consequences of their endeavors)
- Check each student on their current mastery level of the skill they will teach
- Complete with the student teachers their specific program plan
- Duplicate diplomas (or a sample for now)

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TRAINING SESSION 1: TRAINING STUDENTS TO ACCEPT "TEACHING RESPONSIBILITIES"

PURPOSE: At the end of this session, each student teacher should be able to explain to their friends and parents the purpose of a teaching-learning team, what their role in the program is, who and what they will teach. Looking at their own teaching-learning Program form, they should also be able to tell anyone who asks what days they teach, what time and where. The student teacher should also be able to explain the goal to which they will be working with their partner and the consequences of achieving the goal.

TIME: Approximately one half hour to forty-five minutes per 2 or 3 students.

POINTS TO MAKE WITH YOUR NEWLY APPOINTED STUDENT TEACHERS:

TIME:

:00 Introduction: why you are gathered together (Teacher training) An explanation of the student-to-student program (how one student can help another student IF they know how to teach)

:05 An explanation of the new FACULTY MEETINGS you will be having to train them to be teachers (when and where)

:10 What it means to be a teacher: not one person who knows more than another but one person who knows DIFFERENT things and can help someone with a particular NEED.(not problem). Perhaps a brief examination of which skills they (the students in the group) still need help on and who COULD BE other teachers for them.

:20 An introduction to the students they will be working with and the specific skills

:25 Brief "mastery of the skill" check for each student

:35 Competion and discussion of the *TEACHER-LEARNER PROGRAM* form

:45 Explanation of the goals they are trying to work towards with their partner and the positive consequences for each partner in the team

Certificate of Award

TO ALL WHO SEE THIS CERTIFICATE: GREETINGS!

THIS CERTIFIES THAT

HAS SUCCESSFULLY COMPLETED A TEACHER PREPARATION COURSE AT

AND IS NOW READY TO PARTICIPATE IN A TEACHING-LEARNING TEAM.

In Witness Whereof, our signatures are hereunto affixed this _____ day of _____ 19__

_____ _____

SAMPLE CERTIFICATE

TEACHER TO DOS

SESSION 2

- Explain to each student what she or he will be teaching (specific)
- Provide each student with the materials s/he will use to teach
- Provide each student with a daily drill sheet for the skill they will teach

and

- Instruct each student "teacher" in how to identify and correct errors

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TRAINING SESSION 2: TRAINING STUDENTS TO IDENTIFY SPECIFIC LEARNING NEEDS: ERROR ANALYSIS

PURPOSE: At the end of this session, each student teacher should be able to explain to you why it is important to instruct to specific errors, how to identify them and how to instruct to them. Looking at the materials you will have provided them, each student should be able to accurately tell you what types of behavior will constitue an error response and which behaviors may be counted as correct responses.

TIME: Approximatley one half-hour to forty-five minutes per 2 or 3 students

POINTS TO MAKE:

TIME:

:00 Meet and greet the students. Review briefly yesterday's discussion of what it means to teach someone. Review briefly their teaching assignments.

:05 Distribute to each student those materials they will use with their "learning" partner. Tell them to put them (when you finish this session) in a safe spot (you can be specific). After everyone has the right materials, begin a discussion which is content specific to the subjects they will teach (i.e., reading phrases from the basal reader). Explain to them that we all makes errors - and all of us different kinds of errors. The students they will work with will make errors also, and it is their job to give them the right answers. Explain the types of errors that can be made according to the materials you've passed-out.

:25 Spend about 10 minutes discussing *VERY DIRECT* strategies for correcting errors (see next page). DEMONSTRATE & PRACTICE.

:35 Conclude the session with a summary of the days activities and a reminder to carefully store materials.

LOOKING FOR ERRORS

* What can be considered a "wrong" response or *LEARNING OPPORTUNITY*

  a word misread?
  an entire phrase misread?
  a pause?
  a wrong responses followed by a self-correction?

* Are there *SPECIFIC ERROR* (saw for was) of *SPECIFIC ERROR PATTERNS* (all addition problems with carrying)?

  Should you work on all of them at once?

  How many are there?

CORRECTING ERRORS

DON'TS:

* Don't keep asking "What is this?" If the learner KNEW the answer she or he wouldn't keep making an error response

* Don't coach or prod: "Come on, you did this yesterday"

* Don't give insufficient directions (i.e., pointing to a yellow card with the letter /A/, don't say, "What is this?" The learner is likely to say, "Why, it's a yellow card!" And she or he will be absolutely correct!

DO:

* Do tell the learner the correct response immediately and ask them to repeat it after you.

* Give specific directions to begin with: "Say the name of this letter /A/

TEACHER TO DOS

SESSION 3

- Provide an overview of the session by talking about different ways students learn and different ways teachers teach
- Demonstrate how to ask for a specific response and how to identify an error (review)
- Explain the importance of drill toward specific errors or learning opportunities
- Provide an opportunity for each student teacher to practice delivering a piece of material, watching or listening for correct and error responses and how to deliver appropriate and sufficent drill.

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TRAINING SESSION 3: TRAINING STUDENTS TO DELIVER EFFECTIVE INSTRUCTION: TEACHING TO ERRORS THROUGH SPECIFIC DRILL

PURPOSE: At the end of this session, each student teacher should be able to explain to you how to introduce a lesson, how to set the goal for the lesson (today we will...), how to teach to a specific learning opportunity (or error), how to correct the error and how to foster adequate and appropriate drill. During the session, each student teacher should have been given ample opportunities to demonstrate his or her mastery of these concepts with time from you for encouragement, correction (if necessary) and motivation to keep going.

TIME: Approximately 45 minutes to one hour (depending on the amount of practice, demonstration each student needs or can handle. (For approximately 2 or 3 students)

POINTS TO MAKE:

TIME:

:00 Briefly review yesterday's (or previous session's) content. Answer any questions. Set the stage for this session by explaining to each student what you hope to accomplish (see purpose above)

:05 Spend about 5 minutes explaining to your students the importance of making the learner comfortable when you start a lesson. Explain to them that certain things that they can do like having the materials ready to use, etc. can help make the session run smoothly. Next, explain to them why it is important to tell the learner what you hope to accomplish by the end of the lesson (goal setting).

:10 The heart of the lesson: how to deliver effective instruction. Using the content appropriate to each student-teacher and his or her partner, demonstrate at least one way in which the lesson can be introduced and set-up for optimal practice opportunities. Let each student demonstrate and practice the delivery strategy you design.

:30 Introduce the specific drill sheets you have prepared for each teaching-learning team. If possible, tell each teacher how she or he can duplicate the materials when they need more.

TRAINING SESSION THREE: CONTINUED

:40 Pair the students in the session and let them run through an entire teaching session including:

* selecting the materials to be used
* telling the learner where and when to meet
* introducing the lesson
* setting the lesson goal
* identifying errors or learning opportunities
* practicing toward the errors

WHEN YOU DEMONSTRATE A SKILL...

- *BE SPECIFIC!!!!!*
- *DEMONSTRATE, CLEARLY, ONLY ONE CORRECT RESPONSE AT A TIME AND WAIT FOR A LEARNER RESPONSE AFTER EACH DEMONSTRATION!*
- *NEVER MOVE ON TO A NEW SKILL OR ITEM UNTIL THE LEARNER HAS DEMONSTRATED THE SKILL TO YOU CORRECTLY!*

AFTER YOU HAVE DEMONSTRATED A SKILL...

- *GO BACK WITH THE LEARNER AT LEAST THREE TIMES TO REPEAT EACH LEARNING OPPORTUNITY (to make sure it's correct) BEFORE YOU MOVE ON TO MORE MATERIAL*
- *PRACTICE. AND PRACTICE SOME MORE.*

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TEACHER TO DOS

SESSION 4

- Provide your students with a complete but simple understanding of the importance of sufficient positive feedback as well as informational (or corrective) feedback
- Demonstrate a sample of lesson without any feedback from the "teacher"
- Demonstrate a sample lesson in which adequate feedback is given
- Solicit feelings from your students about how they feel when someone tells them "you're doing great!"

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TRAINING SESSION 4: TRAINING STUDENTS TO DELIVER SUFFICIENT POSITIVE AND INFORMATIONAL FEEDBACK

PURPOSE: At the end of this session, each student teacher should be able to tell you why it is important to tell a learner when she or he is working well or progressing well. And, why it is important to deliver feedback which gives the learner information about the types of responses he or she is making (both correct and error)

(Session four and session three can be closely interrelated. In the previous teaching session you taught your students how to deliver effective instruction and how to demonstrate a skill. In a sense, the strategies employed to teach are the same kind of strategies employed to inform: *directness and specificity*. And *frequency*.)

TIME: Approximately 30 to 45 minutes per 2 or 3 students

POINTS TO MAKE:

TIME:

:00 Explain to your students that this lesson is designed to give them an understanding of the IMPORTANCE of telling learners how well their doing - both in terms of encouragement and information. Receive any unanswered questions from previous sessions.

:05 Demonstrate a 1-minute lesson where you do not give the learner any corrective or informational or positive feedback Don't even smile. Ask the students how the learner did. Chances are they won't know.

:10 Demonstrate a 1-minute lesson where you do give both positive and informational feedback. Now ask your students how the learner did.

:15 Spend this time discussing ways in which the students in the group can give informational and supportive feedback to the students they will teach. After that's done, spend a few minutes on how important it is to deliver feedback frequently.

:25 Close the session with a brief recap of everything which has been learned to date.

TEACHER TO DOS

SESSION 5

- Provide each student with some specific guidelines for managing behavior: guidelines for increasing appropriate behavior and guidelines for decreasing inappropriate behaviors
- Review the previous four lessons. Call for a final demonstration of a session program: from the introduction of a lesson, through the identification of errors, drill strategies to delivering feedback
- Graduate those students who can successfully demonstrate their assigned lessons. Distribute diplomas

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TRAINING SESSION 5: TRAINING STUDENTS TO MANAGE APPROPRIATE AND INAPPROPRIATE BEHAVIORS

FINAL REVIEW OF SKILLS

GRADUATION

PURPOSE: At the end of this session, each student teacher should be able to explain to you how to get "their learner" to increase his or her good behaviors and how to decrease inappropriate behaviors. The session is also designed to act as a synthesis of the preceeding four lessons which, for those students who can successfully deliver their lesson, ends with graduation and the acceptence of their "teaching diplomas."

TIME: Approximately 30 to 60 minutes, depending on how elaborate you care to make the ceremony.

POINTS TO MAKE:

TIME:

:00 Explain to students the activities of the session (1 - 2 - 3). Receive any last minute questions or concerns.

:05 Discussion on how to build appropriate behaviors. Give you students a brief understanding of the principle of *POSITIVE REINFORCEMENT*. That is, simply, when we do something good, and somebody else notices and SAYS something to us about our good behavior, we are likely to do it again. Include some comments on how it is very important to be direct and specific about the kinds of positive reinforcement we give one another (i.e, not: "That's good" but rather: "That sure is a clear /N/)

:15 Discussion on how to discourage inappropriate behaviors. During this portion, give your student teachers a brief understanding of the concept of *IGNORING*. Explain to them if they pay attention to bad behaviors and say something about them, they will increase just as if they were good behaviors! Practice ignoring someone in the group. It's hard but it can be done. Expalin that the behavior being ignored may increase at first (the person will want your attention) but that if you continue, it will probably go away. Besides, remind them that every person does enough good things to attend to: PAY ATTENTION TO THE GOOD THINGS THAT ARE GOING ON!!

:30 Final review and graduation.

SERIES I STUDY

STUDY SERIES I: *AN INVESTIGATION OF THE EFFECTS OF PEER TEACHERS ON THE "SAY LETTER" PERFORMANCE OF HANDICAPPED KINDERGARTENERS IN REGULAR AND SPECIAL CLASS SETTINGS.*

PRIMARY RESEARCHER: Rita J. Sherbenou

REGULAR CLASS TEACHER: Frances Law

SPECIAL CLASS TEACHER: Patricia Richardson

SCHOOL: West Park Elementary, Moscow, Idaho

STUDY ABSTRACT

This study evaluated the ability of peer teachers utilizing the Instructional Implementation Plan (IIP) to teach mainstreamed handicapped children pre-academic skills in the regular classroom setting. A second general purpose of this study was to determine whether the skills learned in the regular class setting would generalize to the special class setting. A single subject design for applied settings was the design chosen for this study.

Five mildly, mentally handicapped kindergarten children were mainstreamed into a regular kindergarten classroom. A corresponding number of kindergarten children from the peer group implemented short-term objectives from the IIP and provided instruction. The area of instruction was letter recognition at the acquisition stage of learning.

The results of the study indicated that handicapped children could make significant progress when given additional help from peer teachers utilizing the IIPs. Further, it was concluded that the skills learned in the regular class setting generalized to the special class setting.

PURPOSE

One general purpose of this study was to determine whether a handicapped child could make significant progress when given additional help from a peer teacher utilizing the IIP. The second general purpose was to determine whether the skills learned in the regular class setting would generalize or transfer to the special class setting

DEFINITIONS

Peer Teacher: *For the purposes of this study, a peer teacher is defined as a child who has not been diagnosed as handicapped, who is approximately the same chronological age of the identified handicapped child, and who teaches academic skills to the handicapped child.*

Handicapped: *For the purposes of this study, handicapped is defined as mildly, mentally handicapped. These children exhibit significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period.*

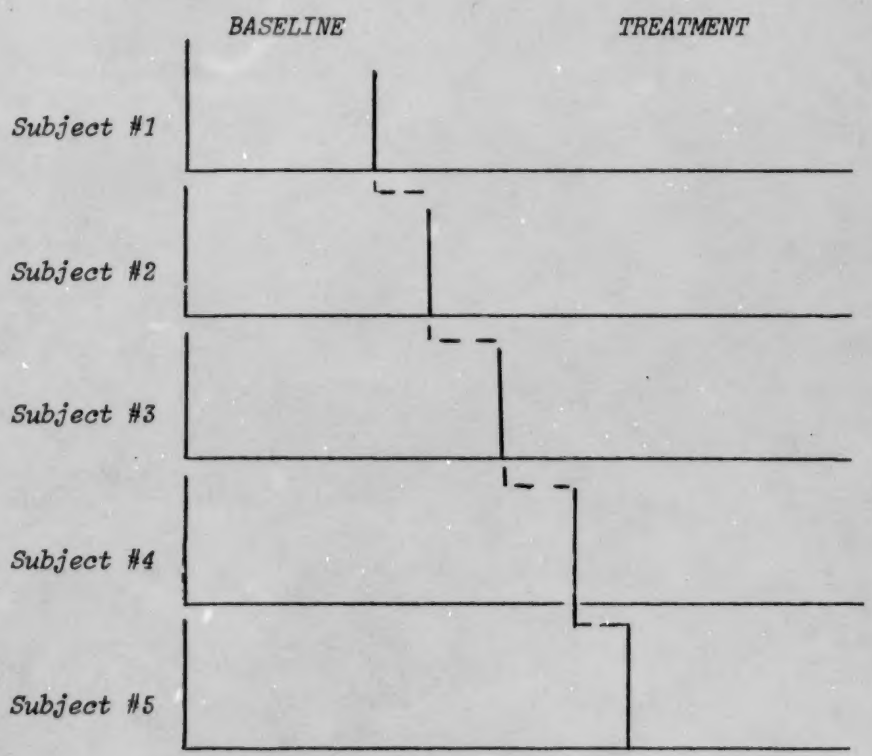
Mainstreaming: *For the purpose of this study, mainstreaming is defined as placement of handicapped children in the regular classroom for a specified amount of time each day. The children are also assigned to a special program.*

IEP: *The individual education plan is a written plan including long-term goals, instructional needs, placement decisions, and the date for review of goals and placement. Names and signatures of each member of the child study team and the signature of a parent must be included.*

IIP: *The instructional implementation plan is specifically designed for the unique needs of each handicapped child. This written plan includes short-term objectives, materials to be used, beginning date and expected completion date of the program and specific strategies for evaluation of progress.*

STUDY DESIGN

A multiple baseline design was employed in this study. In the multiple baseline design, a response is identified and measured over time to provide baselines against which changes can be evaluated. With the baselines on several children established, the researcher initiates a treatment procedure with one child while maintaining baseline procedures with the other children. At a later point in time, treatment procedures are begun with a second child while maintaining baseline with the remainder of the subjects. This process is conintued in sequence until the experimental variable has been applied to all of the children under study. The design is graphically illustrated below.



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SUBJECTS

The subjects of this study were five kindergarten children who had been diagnosed as being mildly, mentally handicapped according to the current definition and procedure of the local education agency. The etiology of each child was different. One child had been diagnosed as hydrocephalic. Two children had been diagnosed as Down's syndrom and two children had unknown etiologies. Prior to the beginning of this study, they had been placed in a special education program and IIPs had been written by the special education teacher. The five children were members of a self-contained special program and all were recommended for participation in the project. Three of the five children were currently being mainstreamed into a regular kindergarten classroom for approximately thirty minutes three days each week. At the beginning of the project all five were mainstreamed for a period of time ranging from thirty to sixty minutes every day.

The peer teachers were chosen by the regular classroom teacher. The teacher was asked to recommend five children who were representative of her class; she was asked to recommend high achieving students as well as low achieving students and aggressive as well as passive children.

Permission to do the study with human subjects was sought and obtained through the University of Idaho Human Subject Assurance Committee prior to the beginning of the study.

TARGET BEHAVIOR

The skills which the peer teachers taught were selected from the IIPs of each child on the basis of the individual's important skill deficits. Each IIP had been developed by the Child Study Team at the end of the preceding academic year. The IIP for each child included recognition of letters of the alphabet. Six letters, B, C, H, J, K and L were targeted for each of the five handicapped children. These children had received no previous instruction on these letters in either the regular or special class setting.

MATERIALS

Several different types of materials were used by the peer teachers. These were:

Letters printed on 2 x 3 and 5 x 8 cardboard;
two inch magnetic letters on a magnetic board;
felt-backed cardboard letters on a felt board; and
wooden letters.

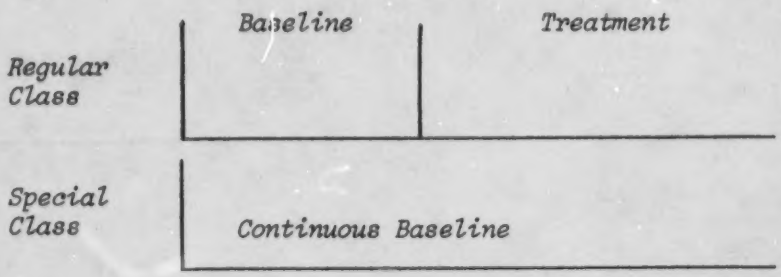
After the first eight weeks of the project, 7x 11 inch pictures of "elaborators" (colorful caricatures of the letters, e.g., Sesame Street-like cartoons of letters) were introduced to provide a little variety for both the peer teachers and the students.

DATA COLLECTION

The data were collected by a test or probe given daily to each child. A data collector verbally inquired as to the name of each individually presented letter and correct responses were tallied. Only the initial response of the child to each stimulus was recorded.

Observer reliability was determined at various points during the study by comparing the results collected by the trained observer with the results collected by the researcher. There was 100 percent agreement on all reliability checks.

Continuous baseline data were collected for each handicapped child's performance on naming the same six letters in the special class setting. No intervention procedures were initiated in the special class setting. These data were collected to determine the generalization of skills being taught from the regular class setting to the special class setting. The complete design for a single child is graphically illustrated below.



Intervention procedures were continued until each child reached a predetermined level of performance. Criterion was defined as three consecutive days of correctly naming all six letters. When each child reached this level of performance, the teaching sessions were discontinued and the intervention phase of the study was designated as complete for that child.

STUDY PROCEDURES

Each day, the data collector entered the special education classroom at the beginning of the class period. This was an afternoon kindergarten program which began around 12:15 or as soon as the children arrived on the bus. At that time, the handicapped children were taken aside and tested on the six letters. Around 12:30, the first group of children joined the regular classroom.

During baseline, the data collector took each handicapped child aside to a quiet area of the regular classroom and tested them on the six letters. During intervention procedures, the data collector took one of the peer teachers and one handicapped child aside to the same area for a teaching session. Due to frequent absences of both the handicapped children and their peers, the same pairs of children did not necessarily work together each day. As might happen in a natural setting, decisions about who worked with whom were made by an adult, in this case the data collector or the researcher. The children exhibited a willingness to work interchangeably with no difficulty or conflict.

Treatment procedures consisted of a peer teacher instructing a handicapped child. During the teaching session, the teacher generally engaged in the following sequence of teaching behaviors. The peer would hold a letter in his/her hand and say, "This letter is ___. What letter is this?" If the handicapped child responded correctly, the peer replied with a positive comment such as "Good!" or "Good job!" If the handicapped child responded incorrectly, the peer replied, "No, this letter is ___. What letter is it?"

Some of the materials required matching letters. With these materials the peer would either point to or hold a letter and ask the student to find the matching letter. The peer would then ask, "What letter is this?" and follow with the appropriate reinforcement. The final stage of the teaching session was to name the letters with no cueing from the peer teacher.

At the close of each individual teaching session the peer teacher returned to the current classroom activity. The handicapped child was then tested by the data collector and subsequently joined the class. Thereafter, the next pair of children would begin working.

STUDY RESULTS

A descriptive and graphic presentation of the data collected in the regular class setting was made before an analysis of the data collected on each child in both the regular and special class settings. Figure 1 displays the number of letters correctly identified by the children during the baseline and treatment phases. Absences of more than two days are noted on the graph.

The data from the regular class indicate that the treatment did, in each case, increase the academic performance of the mentally handicapped children. It may be noted that Sean made progress after intervention procedures were initiated and the baselines of the other children remained essentially the same. Bobby progressed after peer teaching was started while the baselines of the other children remained at the same rate of response. The same pattern occured for the following three subjects. In each case, the child progressed and eventually reached criterion level after the treatment phase was begun.

The following is a descriptive analysis and graphic display for each child's performance in both the regular and the special class settings. Each graph contains the regular and special class data for a single child.

As may be observed in Figure 2, regular class baseline performance for Sean varied between one ane two correct responses for each day. Treatment was begun on the seventh day of the study and criterion was reached after twenty-four days of treatment. Performance in the special class setting closely approximated performance in the regular class even though treatment procedures were not instituted. The skill taught in the regular class transferred to the special class setting.

Figure 3 shows that Bobby also performed between one and two correct responses each day during the regular class baseline period. Treatment was begun on the tenth day of the project and criterion was reached after twenty-nine days of peer teaching. The performance in the special class setting was very similar to the performance in regular class. As might be expected, there was a slight lag in the special class performance.

Jack's performance during the baseline phase in the regular class setting was, as shown in Figure 4, also between one and two correct responses each day. Treatment was begun on the twelfth day and criterion was reached after thirty-six days of peer teaching. There was improvement noted in the special class although the performance was somewhat erratic.

Figure 5 displays the performance of Sue. Regular class baseline performance was between zero and two correct responses per day. Peer teaching was begun on the eighteenth day of the study and criterion was reached after fourteen days of teaching. Improvement in the special class setting closely corresponded to the improvement in the regular class setting.

Figure 6 shows that Jane performed an average of two correct responses each day during baseline. Treatment was begun on the twenty-ninth day and criterion was reached after nineteen days of treatment. Performance in the special class setting improved at nearly the same rate as the performance in regular class during treatment procedures.

The data indicate that there is, indeed, a difference for the children's performance from baseline to treatment phases. A comparison of the regular class and special class data indicated very similar performance by each child, even though treatment procedures were not instituted in the special class setting.

Figure 1

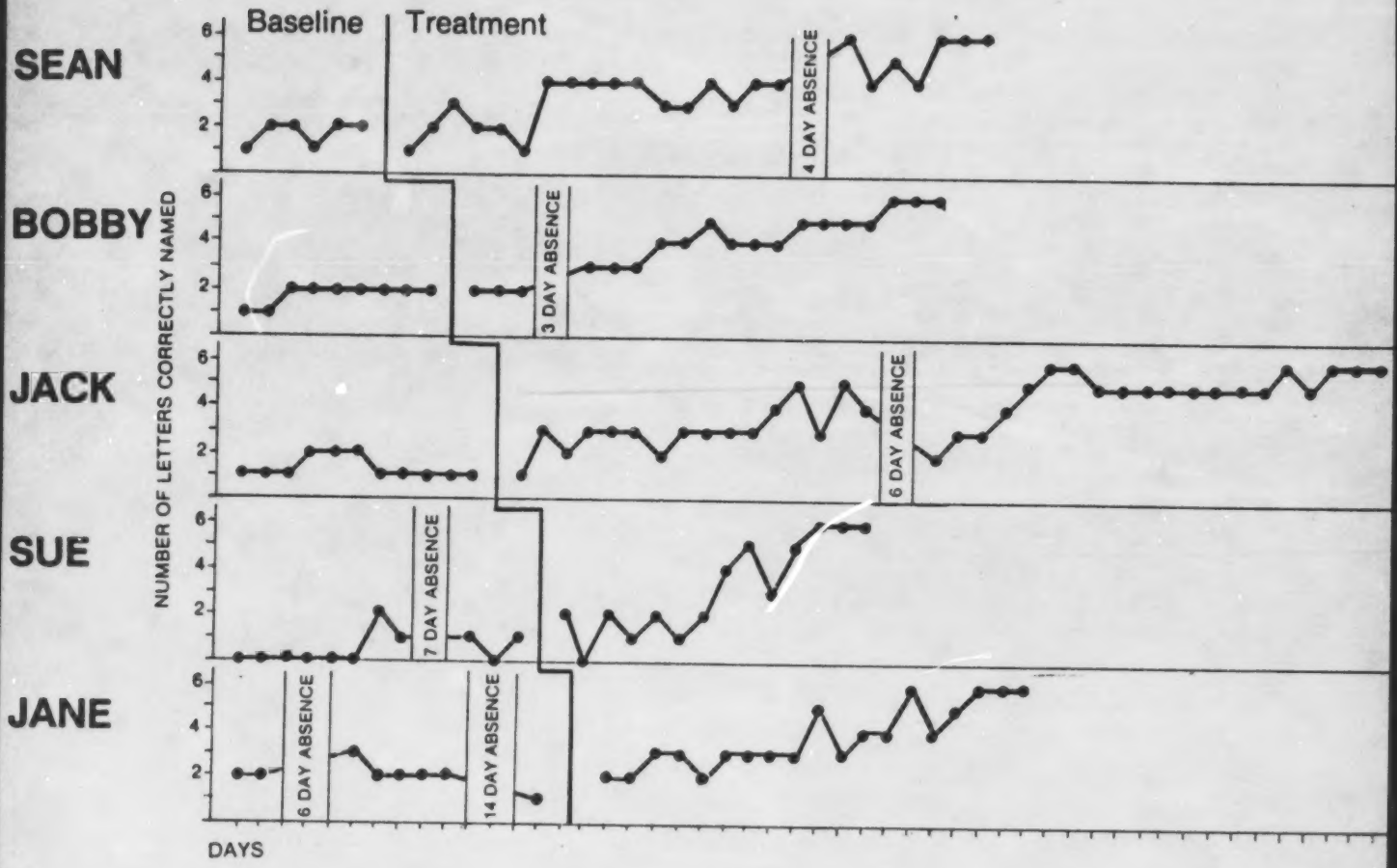

Baseline
Treatment
SEAN
BOBBY
JACK
SUE
JANE
4 DAY ABSENCE
3 DAY ABSENCE
6 DAY ABSENCE
7 DAY ABSENCE
6 DAY ABSENCE
14 DAY ABSENCE
NUMBER OF LETTERS CORRECTLY NAMED
DAYS

Figure 2

SEAN

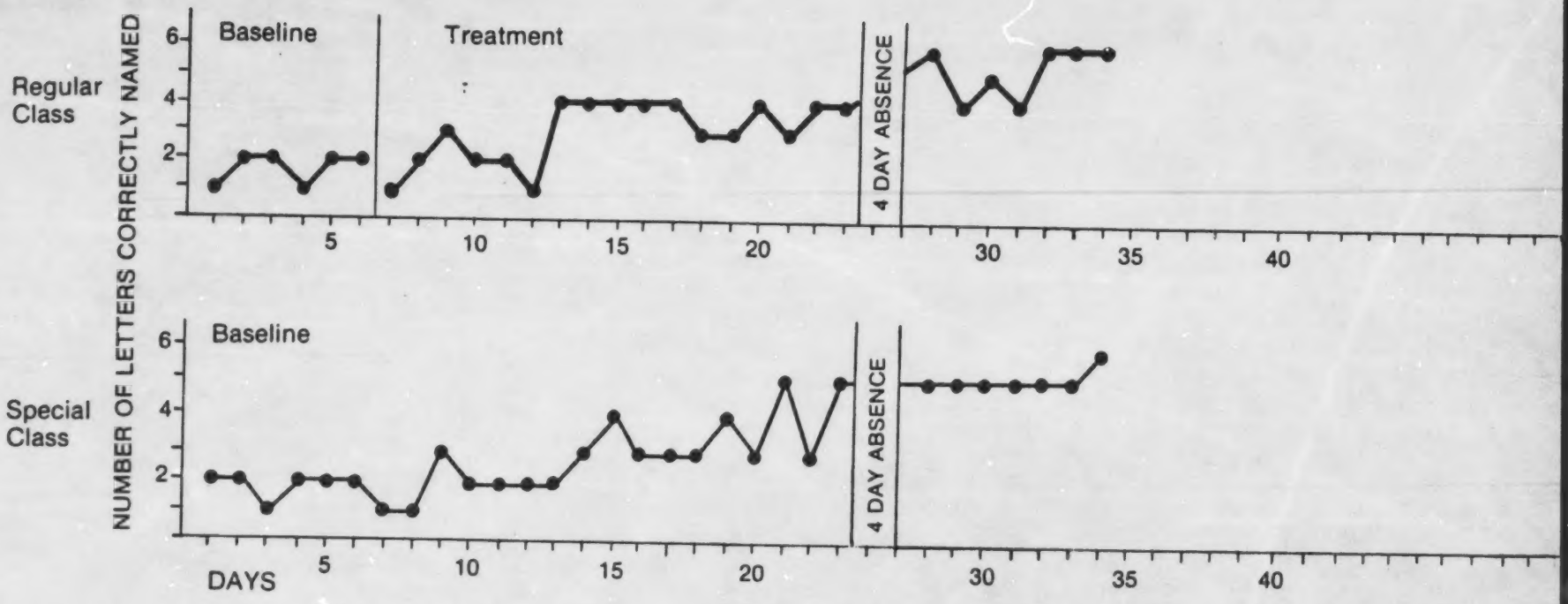


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Figure 3

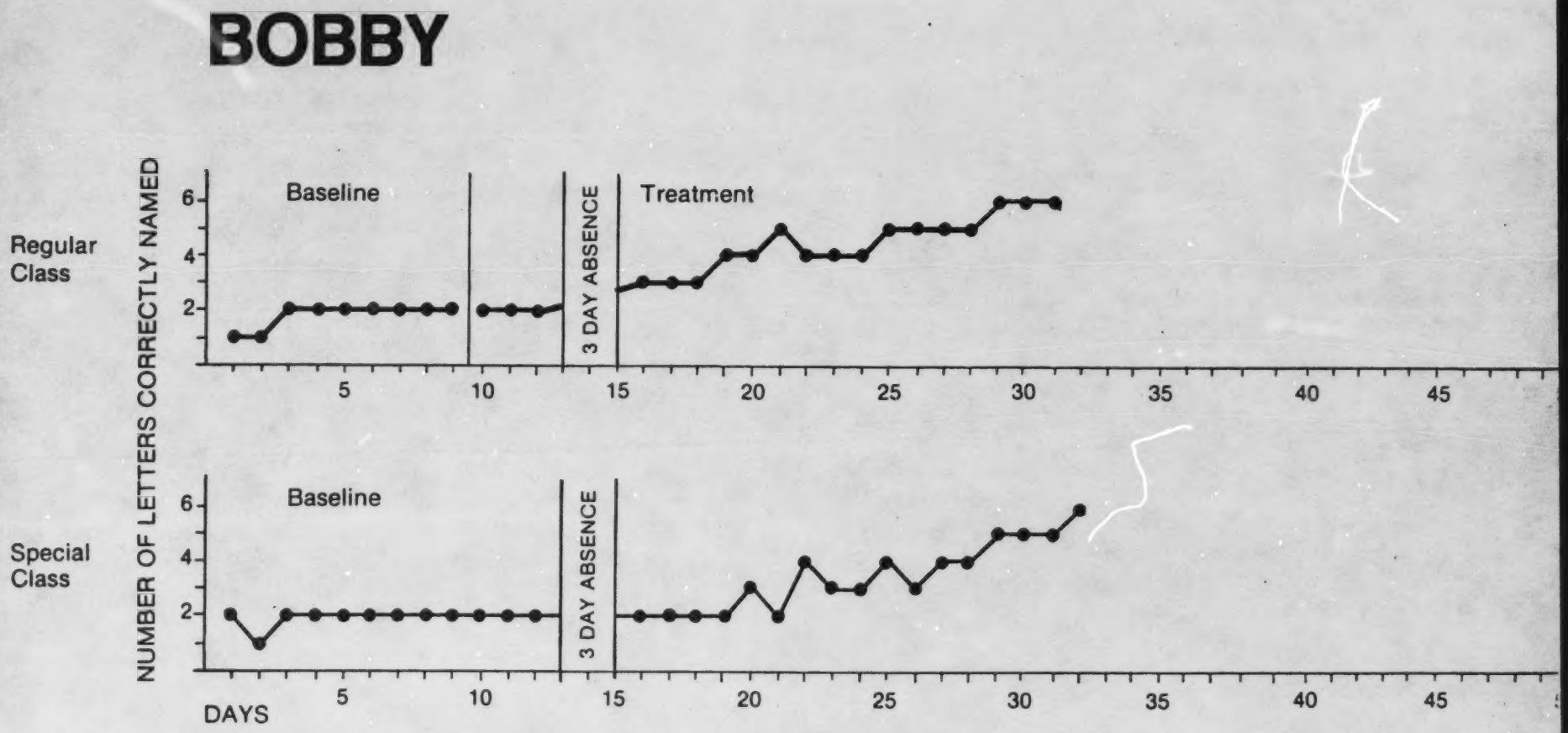

BOBBY
Regular Class
Special Class
NUMBER OF LETTERS CORRECTLY NAMED
Baseline
Treatment
3 DAY ABSENCE
Baseline
3 DAY ABSENCE
DAYS
6
4
2
5
10
15
20
25
30
35
40
45

Figure 4

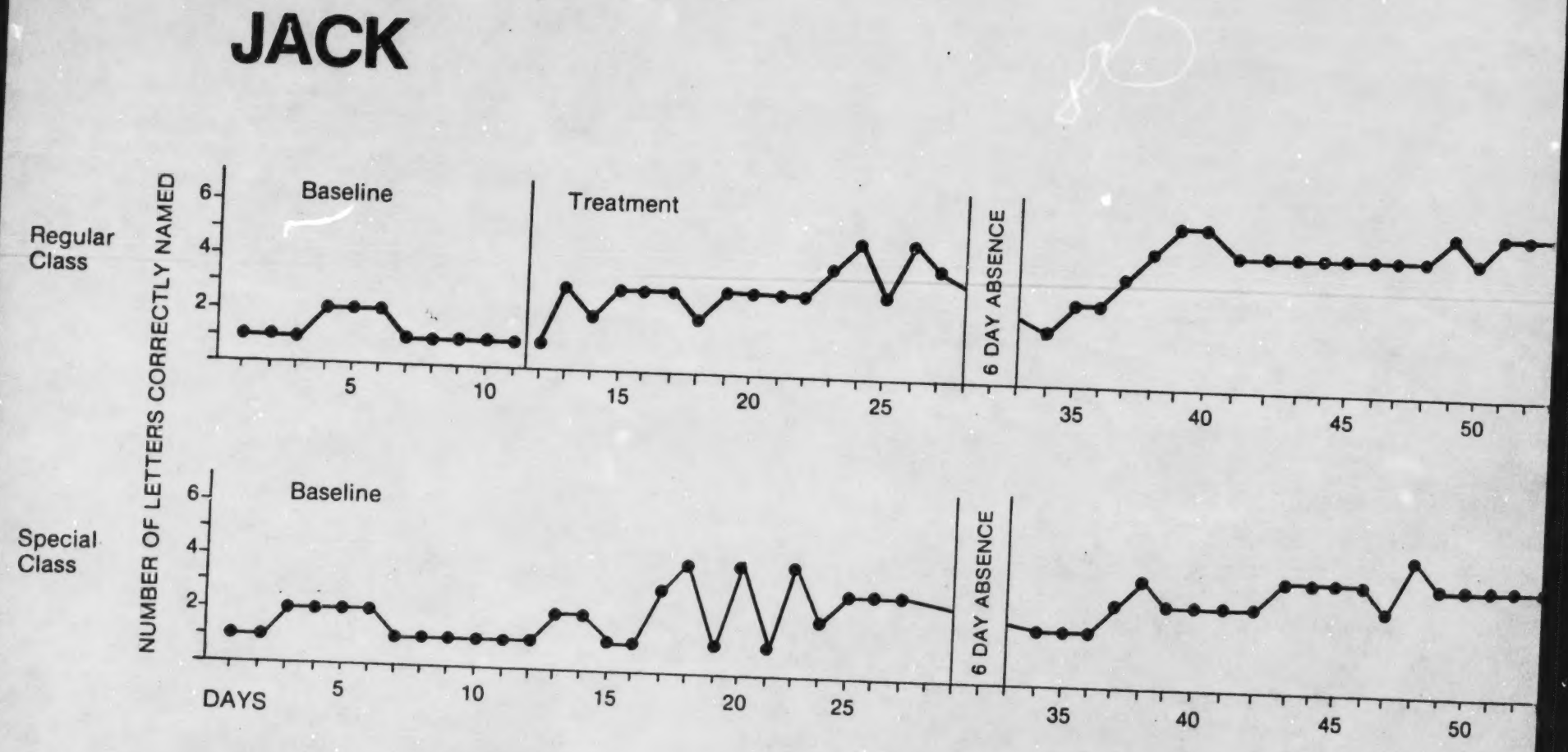

JACK
Regular Class
Special Class
NUMBER OF LETTERS CORRECTLY NAMED
Baseline
Treatment
6 DAY ABSENCE
Baseline
6 DAY ABSENCE
DAYS
6
4
2
5
10
15
20
25
35
40
45
50

Figure 5

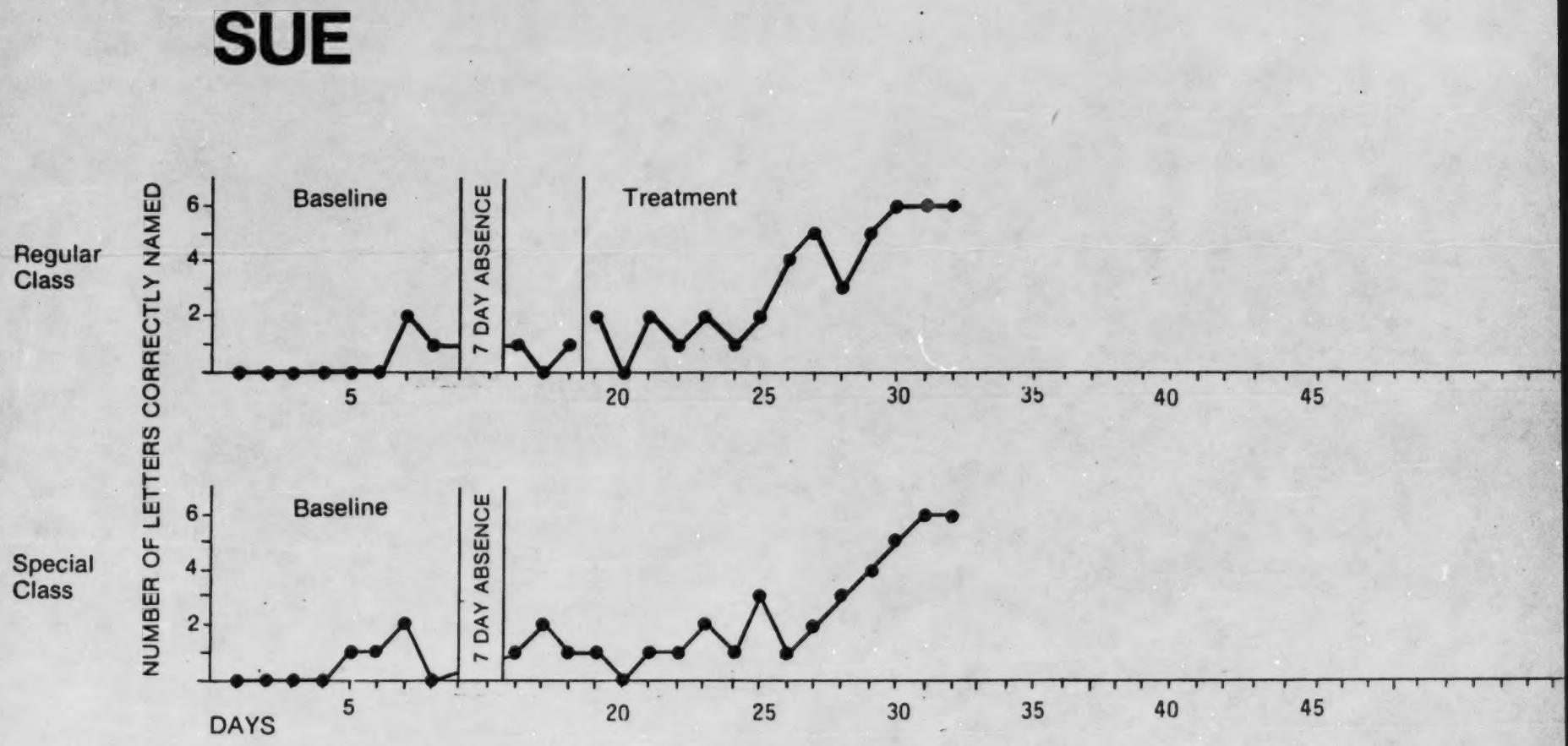
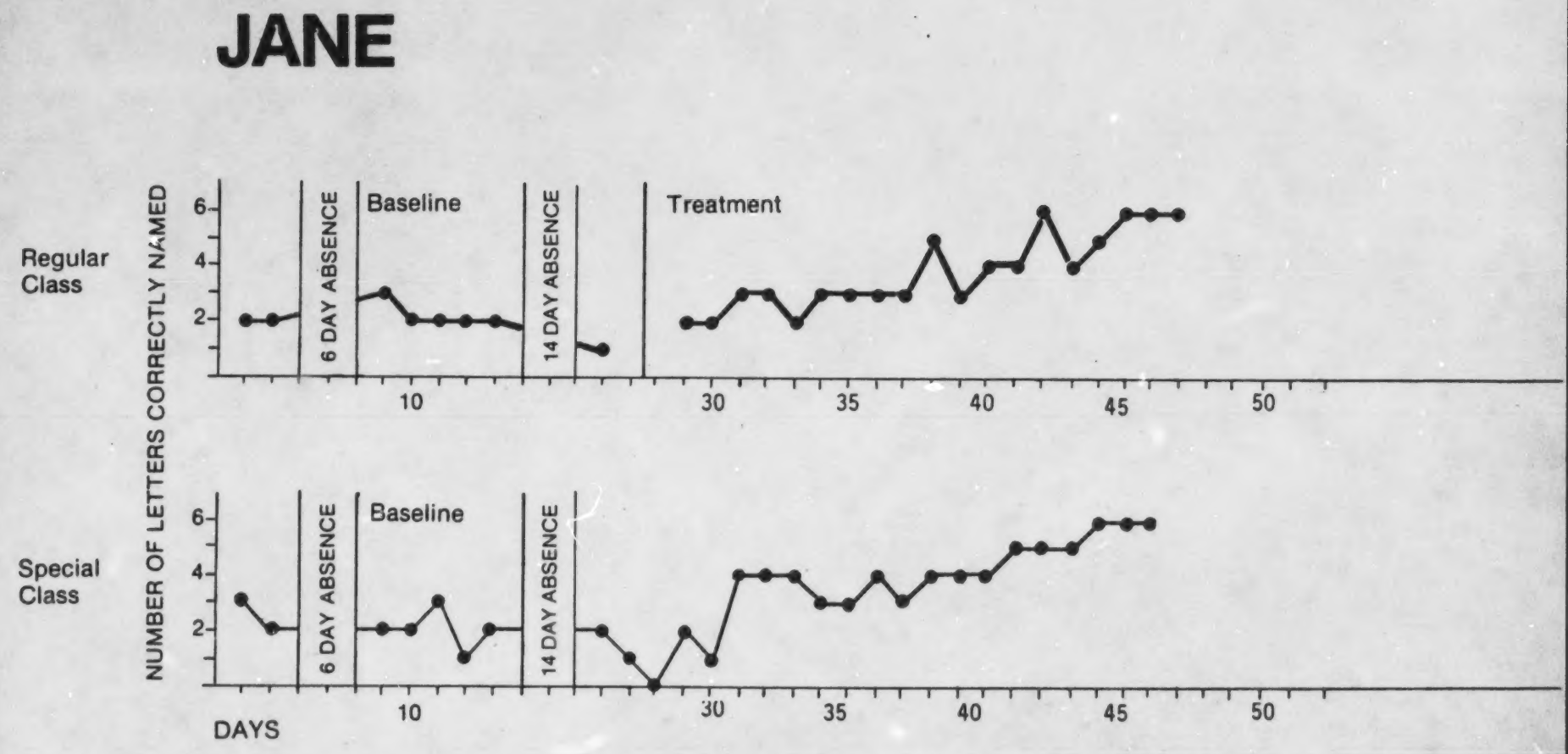

SUE
Regular Class
Special Class
NUMBER OF LETTERS CORRECTLY NAMED
Baseline
7 DAY ABSENCE
Treatment
Baseline
7 DAY ABSENCE
DAYS
6
4
2
5
20
25
30
35
40
45

Figure 6


JANE
Regular Class
Special Class
NUMBER OF LETTERS CORRECTLY NAMED
6
4
2
6 DAY ABSENCE
Baseline
14 DAY ABSENCE
Treatment
10
30
35
40
45
50
DAYS

OTHER FINDINGS

Generally, the peer teachers performed well in the teaching situation. The children exhibited different styles of teaching; that is, some made a game of the teaching session while others were very straight forward and serious in presenting the stimuli. After one week of fairly successful teaching, one peer teacher began to ridicule the child he worked with and refused to cooperate even after repeated training sessions. Consequently, he was dropped from the program and the study proceeded with four peer teachers.

Generalization testing was done at the beginning of each day in the special class setting. This was before the children were taught by their peers in the regular class setting. The special class testing for generalization was done the day after each testing session which was a lapse of at least 23 hours. It may be observed that generalization took place not only across settings, as was hoped, but across time as well.

There were several variables which may have accounted for the successful generalization of skills. Stokes and Baer (1977), in an extensive review, found that using common stimuli across settings and using several stimuli in the training procedure resulted in generalization. An examination of the training procedures in the present study found that the peers used at least five different stimuli to train letter recognition. The same materials were used to test generalization in the special classroom and the data collector remained the same in both settings. There were several common stimuli across settings and more than one stimulus was used in the training.

SUMMARY and IMPLICATIONS

STUDY SERIES I

There were two purposes of the present research. The *first general purpose* was to determine whether a mildly, mentally handicapped child would make significant progress when given additional help from a peer teacher utilizing the IIP. A *second general purpose* was to determine whether the skills learned in the regular class setting would generalize to the special class setting.

A single subject design for applied settings was used to determine the effectiveness of peer teaching with handicapped children in the regular class setting. Five children from a regular kindergarten program and five handicapped children from a self-contained special education program were chosen for participation in the study. Baseline data were taken of the handicapped children's performance on naming six letters of the alphabet. Recognition of the letters B, C, H, J, K, and L was included in the IIP for each child as important skill deficits and these letters were targeted for each of the children. After stabilization of the baseline data, peer teaching was initiated with the first handicapped child. The treatment was subsequently begun at staggered intervals with each handicapped child. Criterion was determined as naming all six letters correctly for three consecutive days.

The results of the study indicated that there was an increase in the academic progress of the handicapped children when the intervention procedures (peer teaching) were introduced. Each child progressed only after peer teaching was initiated. The success of the project indicated that peer teaching is one viable method of providing an individualized program for handicapped children. The implications of such a program are that peer teachers can take some of the responsibility for providing a one-to-one program, thus integrating handicapped children in the regular class. In addition, the handicapped child has a role model for appropriate behavior and establishes rapport with at least one of his/her peers.

There are several strengths of the study which increase the value of the results for educators. One major strength is that it was conducted in an applied setting rather than an artificial or clinical environment. The situation was not contrived; rather it was the type of situation which

many teachers are faced with each day. The behaviors which were studied were relevant to the child. The target behavior was defined by the IIP which was written by the special education teacher rather than by the researcher. This factor eliminated any tendency of the researcher to examine a behavior which was easy to count but not relevant to the child.

A second strength is that the measures were repeated. The experimental design allowed the researcher to look at individual differences over time. Each child served as his/her own control and comparisons of before and after treatment could be made. The treatment effects for individual subjects can readily be seen. Replication of the effects across subjects provides the researcher with evidence of treatment strength and usefulness as well as measuring generalization across settings.

A major purpose of the research was also to examine generalization of skills. Examination of the data for each child indicates that the skills learned in the regular class setting were also demonstrated in the special class setting. Skill generalization was successfully programmed to another setting. The importance of this outcome is that teaching generalization may save valuable time for both the student and teacher. If generalization can be programmed, then the teacher will not have to teach the appropriate response in multiple settings and the student will not have to waste time "relearning" appropriate responses.

It was concluded that handicapped children could make significant progress when given additional help from peer teachers utilizing the IIPs. Further, it was concluded that the skills learned in the regular class setting generalized to the special class setting.

SERIES II STUDIES

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *One*

STUDY TITLE: *An investigation of the effects of Teacher-to-student v. Student-to-student instruction on the reading performance of a moderately handicapped 5th grader.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Mark Ludow

SPECIAL CLASS TEACHER: Jane Butler

STUDENT LEARNER (pseudo name): Rodney

STUDENT TEACHER (pseudo name): John

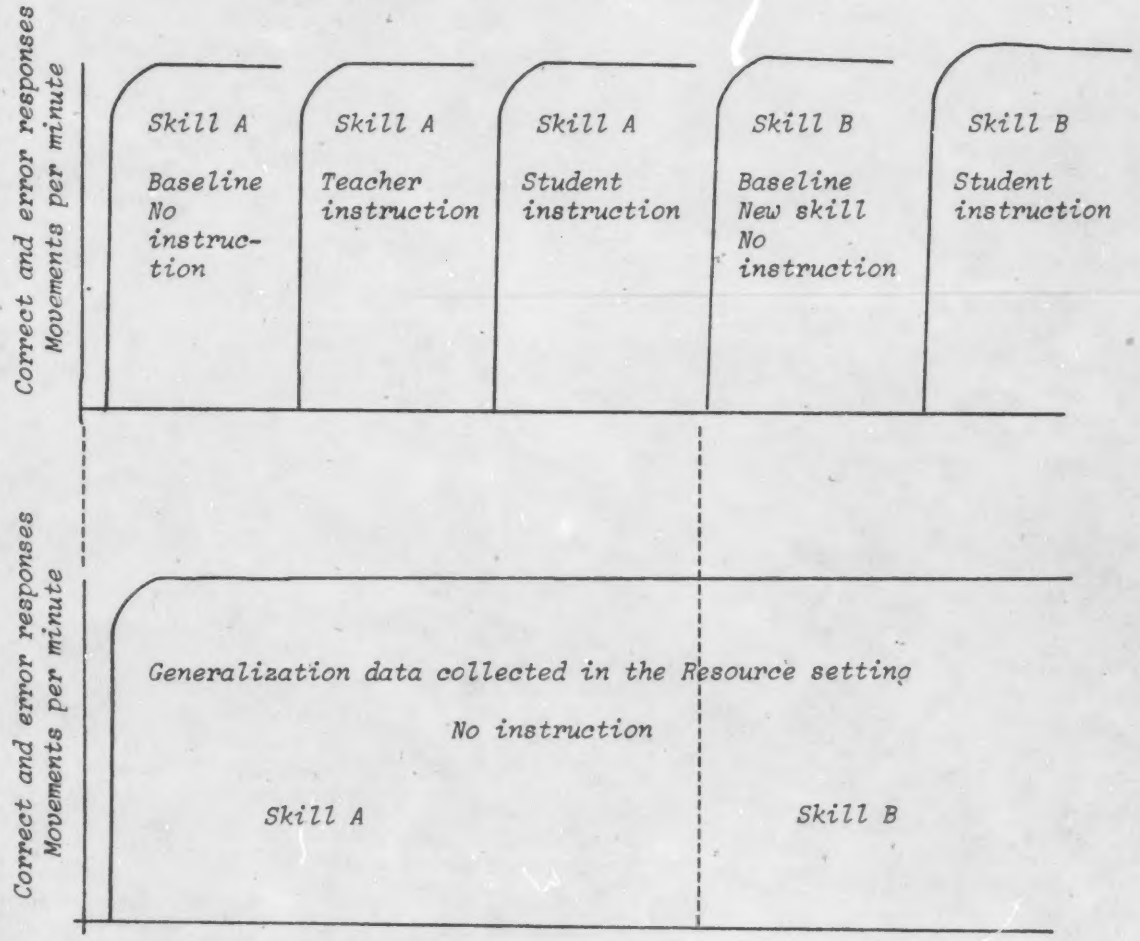
SCHOOL: Ramsey Elementary School, Couer d'Alene, Idaho

STUDY ABSTRACT

The subject of Study One was a 5th grade, moderately handicapped learner who received instruction in both regular and special settings prior to the study. During the experiment, the subject was instruced by both his classroom teacher and friend on "say words" or "say word phrases in the regular classroom. Data was also collected periodically on the same target behaviors in the resource room setting though no instruction took place therein. Analysis of the data show that teacher instruction was more effective for accelerating correct responses than no instruction or student-to-student instruction. Following the 1st baseline condition, BOTH teacher and student intervention strategies produced positive effects for reducing error performance patterns. Following the 2nd baseline condition, student-to-student instruction produced more positive performance patterns for BOTH correct and error responses - indeed, greater advances than had been produced by the teacher intervention during acquistion following Baseline 1. Generalization did occur across settings.

STUDY DESIGN

Simple A-B-A (A-B-C-A-C)
with generalization across settin



45

DATA COLLECTORS: Session one: Kim (8:45)
Session two: Mary (9:05)

DATA COLLECTION TIMES: 8:45 - 8:55
9:05 - 9:15

SKILLS: A: Read words with prefixes and suffixes
B: Read phrases from basal reader

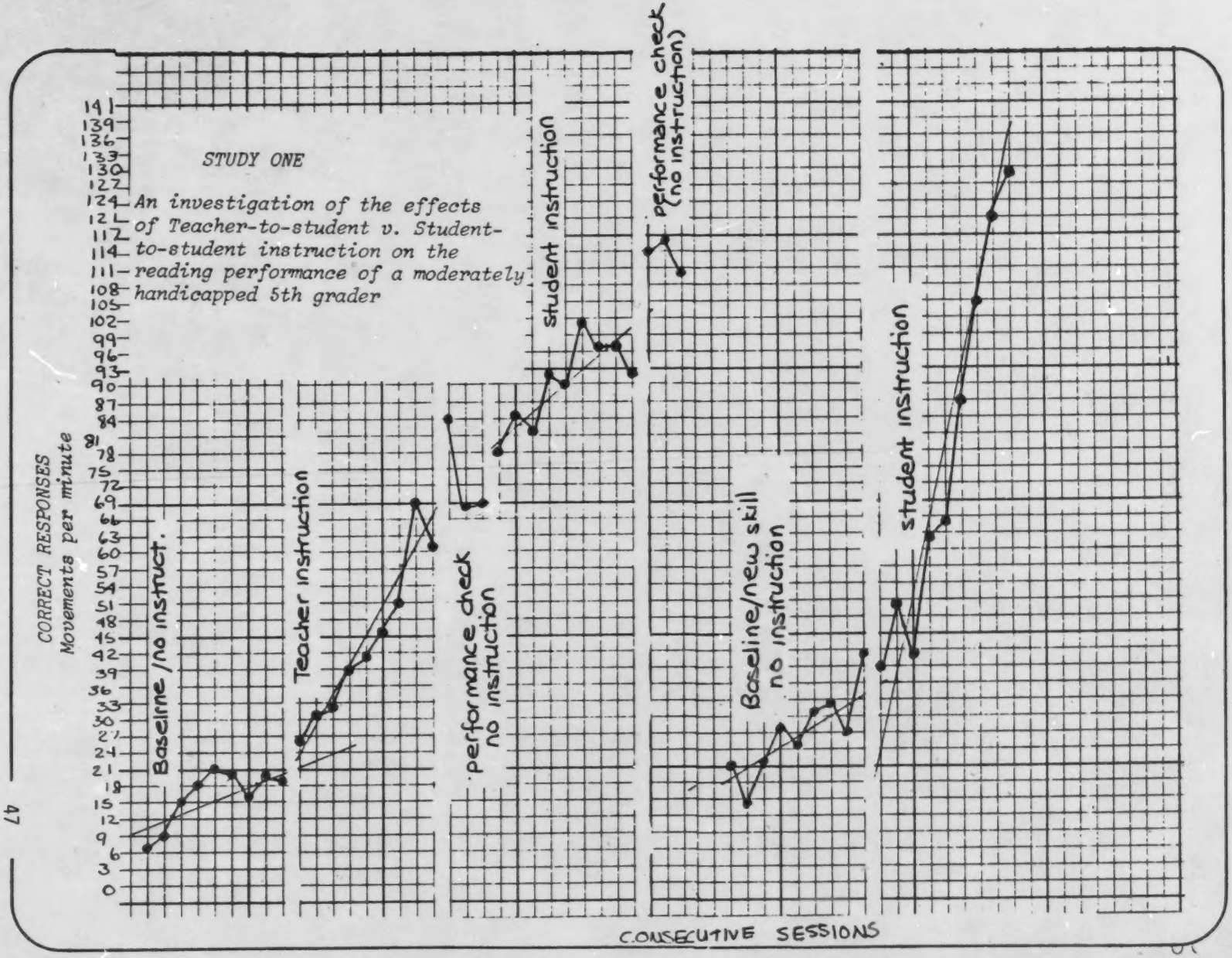
PINPOINT: Read words or read word phrases

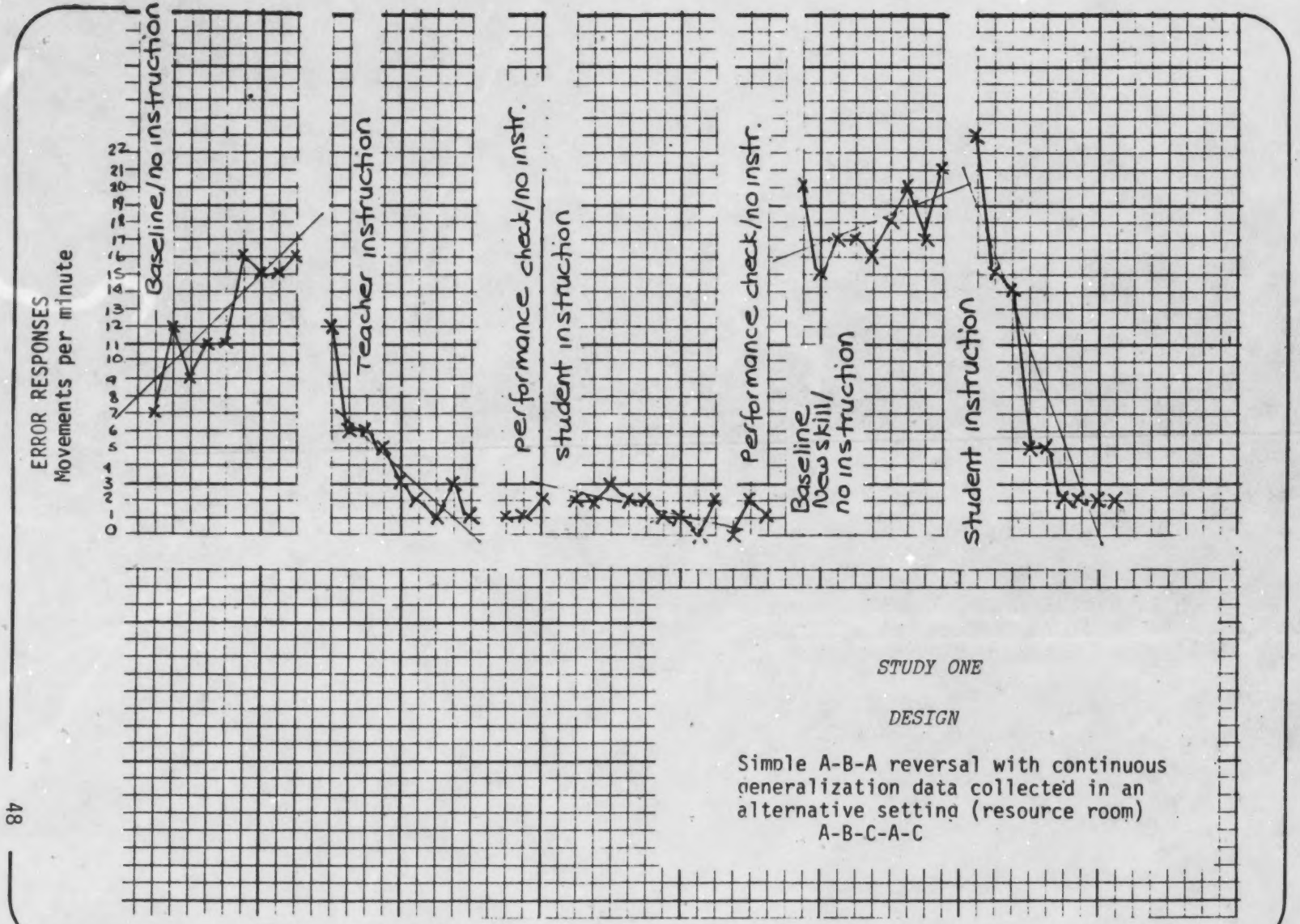
GENERALIZATION DATA COLLECTION: Resource room teachers collects data 2 to 3 times a week in the resource setting/ no instruction

COUNTING GUIDELINES EMPLOYED:

COUNT AS CORRECT ALL WORDS (skill A) and each word read correctly of a word phrases; self-corrections

COUNT AS ERROR all words read incorrectly, words omitted or skipped, incorrect self-corrections and pauses of more than 5 seconds not followed by a response.


STUDY ONE
An investigation of the effects of Teacher-to-student v. Student-to-student instruction on the reading performance of a moderately handicapped 5th grader
CORRECT RESPONSES
Movements per minute
CONSECUTIVE SESSIONS
Baseline /no instruct.
Teacher instruction
performance check no instruction
student instruction
performance check (no instruction)
Baseline/new skill no instruction
student instruction



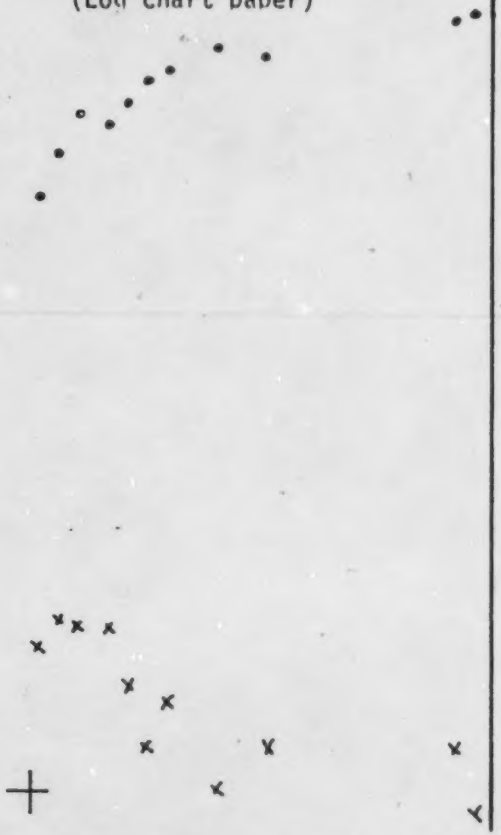
STUDY ONE

DESIGN

Simple A-B-A reversal with continuous generalization data collected in an alternative setting (resource room)
A-B-C-A-C

SKILL A

GENERALIZATION DATA POINTS
RESOURCE ROOM SETTING
(Log chart paper)



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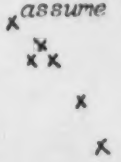
SKILL B

RODNEY
GENERALIZATION ACROSS SETTINGS

RESOURCE ROOM COUNTS / NO INSTRUCTION

When this data is superimposed on actual daily collected in the regular classroom setting, there is adequate match in patterns of performance to assume that generalization took place across settings.



STUDY ONE

AN INVESTIGATION OF THE EFFECTS OF TEACHER-TO-TEACHER VERSUS STUDENT-TO-STUDENT INSTRUCTION ON THE READING PERFORMANCE OF A MODERATELY HANDICAPPED 5TH GRADE BOY (WITH A STUDY OF GENERALIZATION EFFECTS ACROSS SETTINGS)

DATA SUMMARY INFORMATION

BASELINE 1

Correct median:	18	Correct slope:	x 2.10
Error median:	12	Error slope:	x 1.88

FIRST INTERVETNION

Teacher instructed ☑		*Student instructed* ☐	
Correct median:	41	Correct slope:	x 2.8
Error median:	3	Error slope:	÷ 7.0

SECOND INTERVENTION

Teacher instructed ☐		*Student instructed* ☑	
Correct median:	92	Correct slope:	x 1.27
Error median:	2	Error slope:	÷ 3.00

BASELINE 2

Correct median:	27	Correct slope:	x 2.2
Error median:	17	Error slope:	- 1.25

THIRD INTERVENTION

Teacher instruction ☐		*Student instructed* ☑	
Correct median:	65	Correct slope:	x 6.5
Error median:	5	Error slope:	÷ 19

CRITICAL QUESTIONS
Study One

FOR CORRECT RESPONSES

1. *Was the pattern of performance duirng TEACHER INSTRUCTION consistently better than that of the 1st baseline condition?*

   YES ☑ *NO* ☐

2. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the 1st baseline condition?*

   YES ☐ *NO* ☑

3. *Was the pattern of performance during STUDENT INSTRUCTION consistnetly better than that of the 2nd baseline condition?*

   YES ☑ *NO* ☐

4. GENERALIZATION: *Did the pattern of performance in the resource setting closely approximate the performance over time in the regular classroom?*

   YES ☑ *NO* ☐

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERRORS (median and mean scores)

1. *Was the pattern of performance during TEACHER INSTRUCTION consistently better than that of the 1st baseline condition?*

   YES ☑ *NO* ☐

2. *Was the pattern of performance during STUDENT INSTRUCTION CONSISTENTLY BETTER than that of the 1st baseline condition?*

   YES ☑ *NO* ☐

3. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the 2nd baseline condition?*

   YES ☑ *NO* ☐

4. GENERALIZATION: *Did the pattern of performance in the resource setting closely approximate the performance over time in the regular classroom?* *YES* ☑ *NO* ☐

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *TWO*

STUDY TITLE: *An investigation of the effects of teacher-to-student v. student-to-student instruction on the reading performance of a mildly handicapped 2nd grader (with generalization data across settings)*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Patty Perry

SPECIAL CLASS TEACHER: Jane Butler

STUDENT LEARNER (pseudo name): Vicky

STUDENT TEACHER (pseudo name): Beth

SCHOOL: Ramsey Elementary School, Coeur d'Alene, Idaho

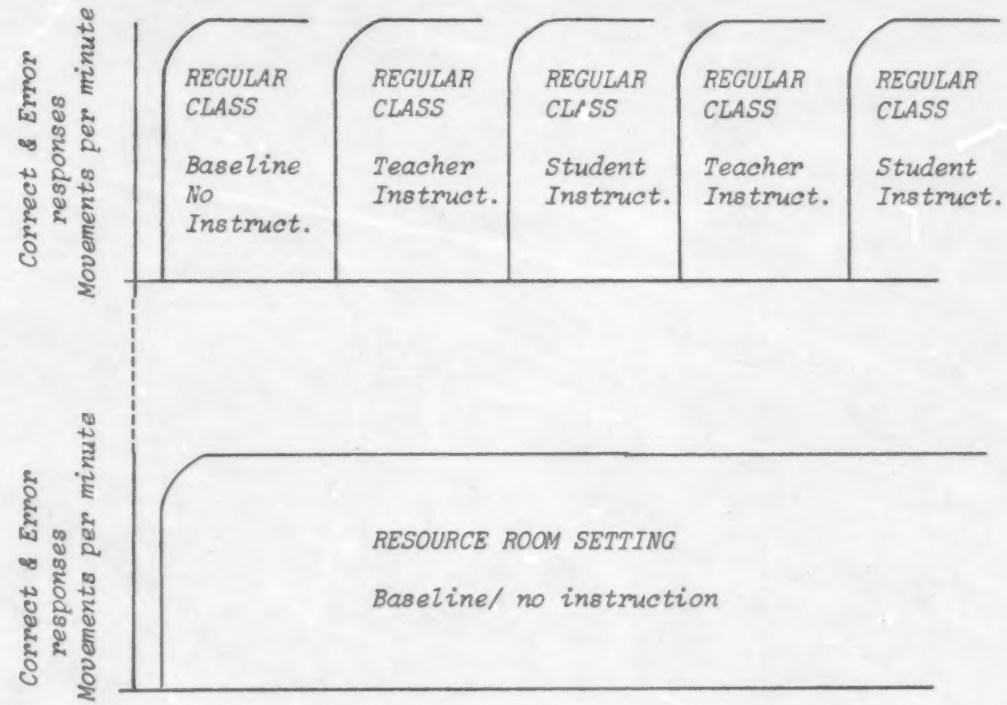
STUDY ABSTRACT

The subject of Study 2 was a second grade learner who was learning to read words with /r/ and /l/ blends. Analysis of the data collected during a simple A-B-A reversal designed study indicate clearly that the subject responded best to instruction from another STUDENT rather than to that of no instruction or instruction from the class teacher. The preference - as demonstrated by consistently improved performance patterns, was true for both correct and error responses. Data collected in the resource room setting indicate that generalization did occur across settings.

STUDY TWO DESIGN

SIMPLE A-B-A REVERSAL
WITH GENERALIZATION ACROSS SETTINGS

(A-B-C-B-C)



DATA COLLECTOR: Mary

DATA COLLECTION TIME: 9:00 - 9:15

SKILL: Read words with short vowels and /R/ and /L/ blends

PINPOINT: Read words

DATA COLLECTION PERIOD: 1 minute

COUNTING AND SCORING GUIDELINES:

COUNT AS CORRECT words read correctly, self-corrections, pauses of more than 5 seconds which are followed by the correct responses

COUNT AS ERROR words read incorrectly, skipped words, words paused of at 5 seconds not followed by a correct response.

13 MARCH

28 MARCH

APRIL 5

APRIL 10

APRIL 21

MAY 1

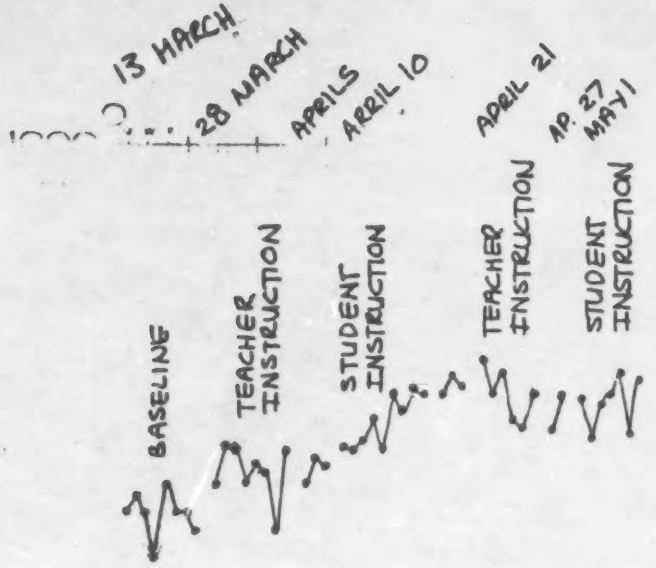
CONTINUOUS BASELINE
NO INSTRUCTION

PERIODIC GENERALIZATION DATA/
Semi-log charting
(for purposes of studying the effects' of student-to-student and teacher-to student instruction across settings)

This data was collected in the
RESOURCE ROOM SETTING/no instruction

VICKY MLDLY HC 2ND GRADER

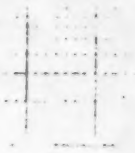
READS WORDS W/ SHORT VOWELS



DAILY DATA RECORD/Semi-log charting
(for purposes of studying the effects of student-to-student and teacher-to student instruction across settings)

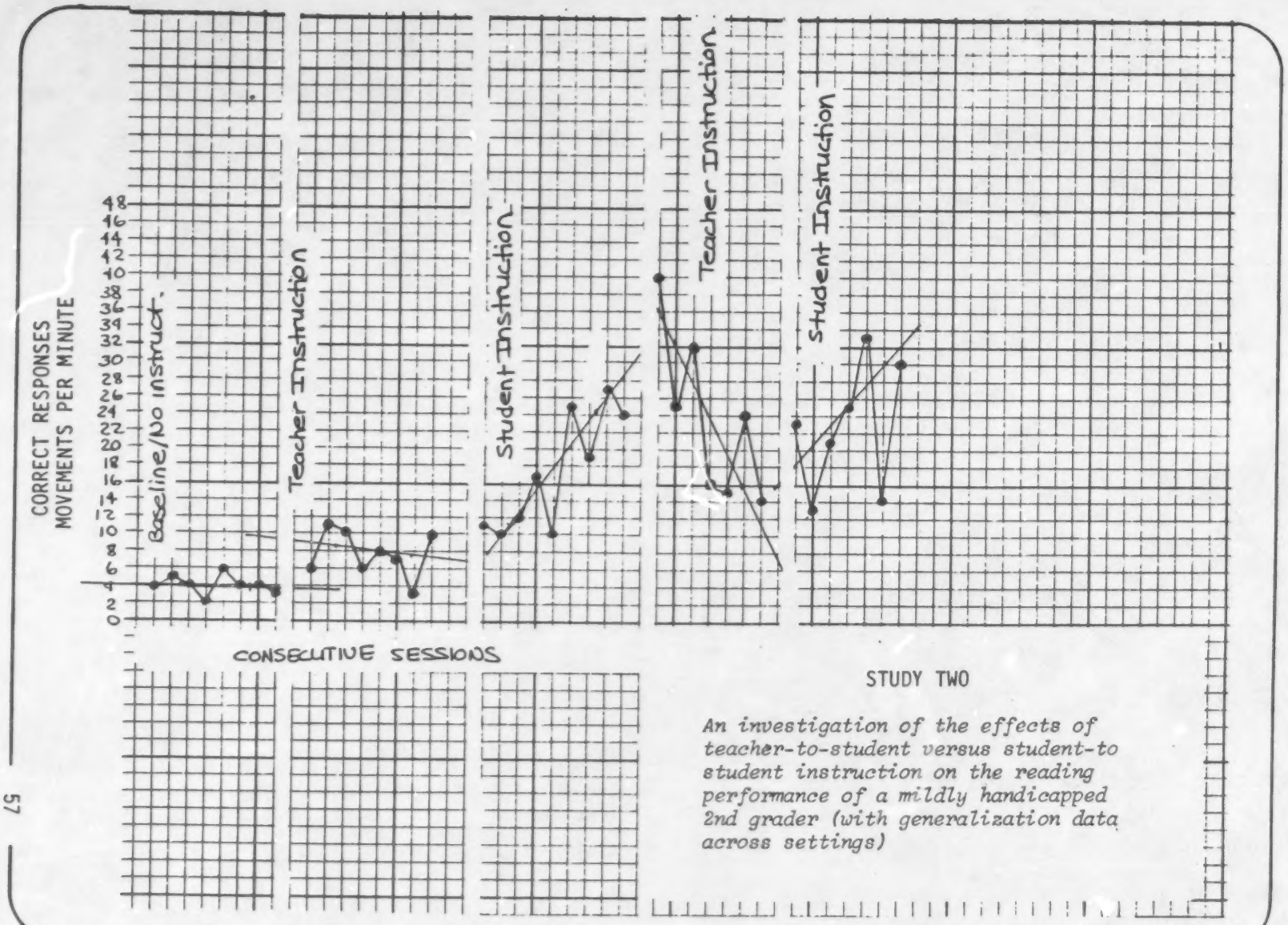
RUCT.

This data was collected in the REGULAR CLASSROOM were the interventions were applied.



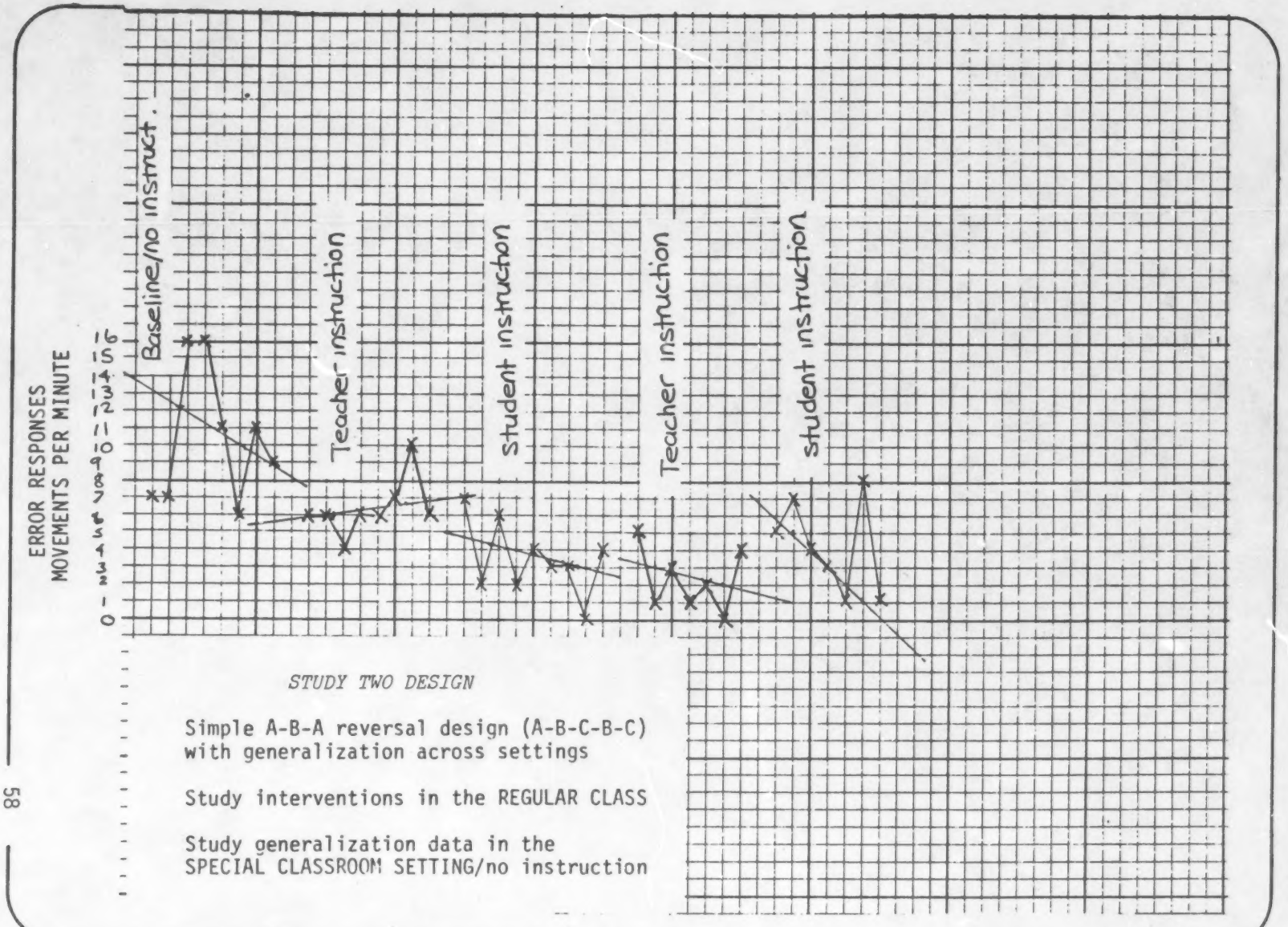
VICKY MILDLY HC 2ND GRADER

READS WORDS W/ SHORT VOWELS



STUDY TWO

An investigation of the effects of teacher-to-student versus student-to student instruction on the reading performance of a mildly handicapped 2nd grader (with generalization data across settings)



STUDY TWO DESIGN

Simple A-B-A reversal design (A-B-C-B-C) with generalization across settings

Study interventions in the REGULAR CLASS

Study generalization data in the SPECIAL CLASSROOM SETTING/no instruction

STUDY TWO

AN INVESTIGATION OF THE EFFECTS OF TEACHER-TO-STUDENT V. STUDENT-TO-STUDENT INSTRUCTION ON THE READING PERFORMANCE (SAY WORDS) OF A MILDLY HANDICAPPED 2ND GRADER (WITH GENERALIZATION DATA ACROSS SETTINGS)

DATA SUMMARY INFORMATION

BASELINE

Correct median: 4 — Correct slope: x 1.0

Error median: 10 — Error slope: ÷ 1.44

FIRST INTERVENTION

Teacher instructed ☑ — *Student instructed* ☐

Correct median: 8 — Correct slope: ÷ 1.28

Error median: 6 — Error slope: x 1.16

SECOND INTERVENTION

Teacher instructed ☐ — *Student instructed* ☑

Correct median: 17 — Correct slope: x 3.50

Error median: 3 — Error slope: ÷ 1.25

THIRD INTERVENTION

Teacher instructed ☑ — *Student instructed* ☐

Correct median: 25 — Correct slope: ÷ 3.0

Error median: 3 — Error slope: ÷ 1.5

FOURTH INTERVENTION

Teacher instructed ☐ — *Student instructed* ☑

Correct median: 24 — Correct slope x 1.77

Error median: 6 — Error slope ÷ 6.00

CRITICAL QUESTIONS
STUDY TWO

FOR CORRECT RESPONSES

1. *Was the pattern of performance during TEACHER instruction consistently better than that of the baseline condition?*

   YES ☐ *NO* ☑

2. *Was the pattern of performance duirng STUDENT instruction consistently better than that of the baseline condition?*

   YES ☑ *NO* ☐

3. *Of the two intervention strategies, which evoked the most favorable pattern of performance?*

   Teacher instruction ☐
   Student instruction ☑

4. *What were the calculated slopes during TEACHER INSTRUCTION?*

   ÷ *1.28 and* ÷ *3.0 Mean slope:* ____

5. *What were the calculated slopes duirng STUDENT INSTRUCTION?*

   x 3.50 and x 1.77 Mean slope: ____

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERRORS (median and mean scores)

1. *Was the pattern of performance during TEACHER instruction consistently better than that of the baseline condition?*

   YES ☐ *NO* ☑

2. *Was the pattern of performance duirng STUDENT instruction consistently better than that of the baseline condition?*

   YES ☑ *NO* ☐

3. *Of the two intervention strategies, which evoked the most favorable pattern of performance?*

   Teacher instruction ☐

   Student instruction ☑

4. *What were the calculated slopes during TEACHER instruction?*

x 1.16 and ÷ 1.5

5. *What were the calculated slopes during STUDENT instruction?*

÷ 1.25 and ÷ 6.0

CONCERNING GENERALIZATION EFFECTS

Did the pattern of performance registered in the resource setting where there was no instruction closely approximate the performance patterns for both correct and error responses of the data collected in the regular classroom?

YES ☑ *NO* ☐

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Three*

STUDY TITLE: *An investigation of the effects of teacher-to student versus student-to-student instruction on the say letter sound performance of a mildly handicapped first grade learner (with generalization studied across settings).*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Betty Cheeley

SPECIAL CLASS TEACHER: Jane Butler

STUDENT LEARNER (pseudo name): Jeff

STUDENT TEACHER (pseudo name): Davey

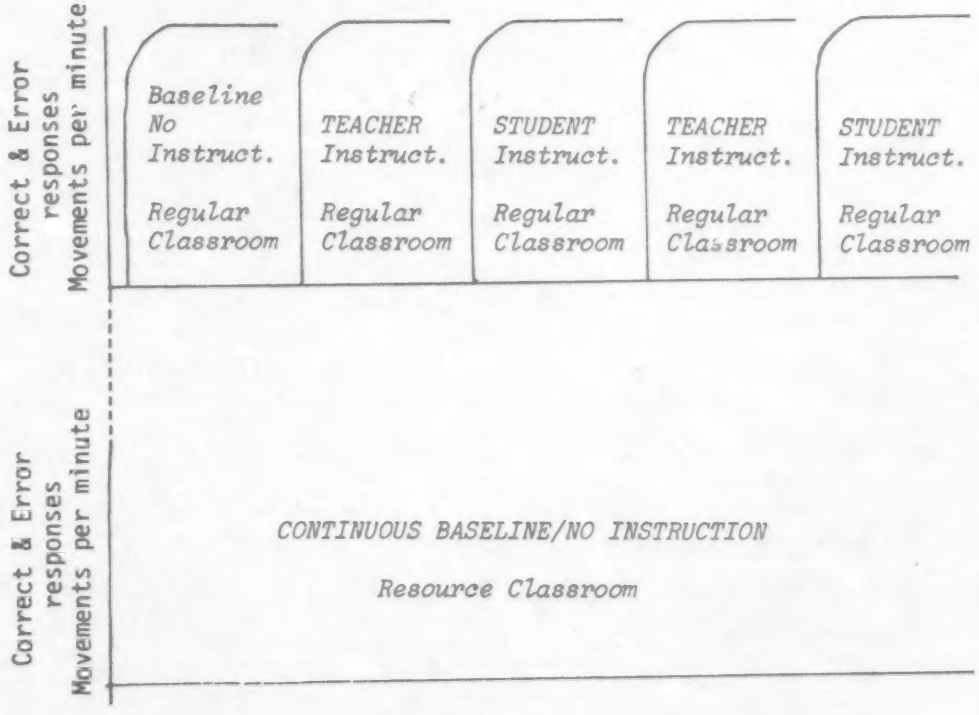
SCHOOL: Ramsey Elementary School, Couer d'Alene, Idaho

STUDY ABSTRACT

The subject of Study Three was a mildly handicapped first grade boy. During the course of the A-B-A designed study, he received instruction from both his classroom teacher and classroom peer who was trained in the art of instruction. Analysis of the data report that the subject's correct performance patterns were positively affected by teacher instruction and negatively affected by student instruction. Despite that pattern which occured also during the reversal condition, the affect did not hold true for error performance; analysis of error data reveal that error performance was best during student-to-student conditions and less favorable during teacher-to-student instructional conditions. Generalization data collected in an alternate setting report that progress coincided in both settings.

STUDY DESIGN

A-B-C-B-C
with
Continuous baseline in alternate setting



DATA COLLECTORS: Kim and Mary / Jane Butler in the Resource Setting

DATA COLLECTION TIMES: 9:40 and 10:40 in the Regular classroom
Anytime during the Res. Rm. instruct. period

DATA AND SESSION LOCATION:
For interventions: regular classroom
For continuous baseline: resource room

SKILL: Say vowel and consonant sounds

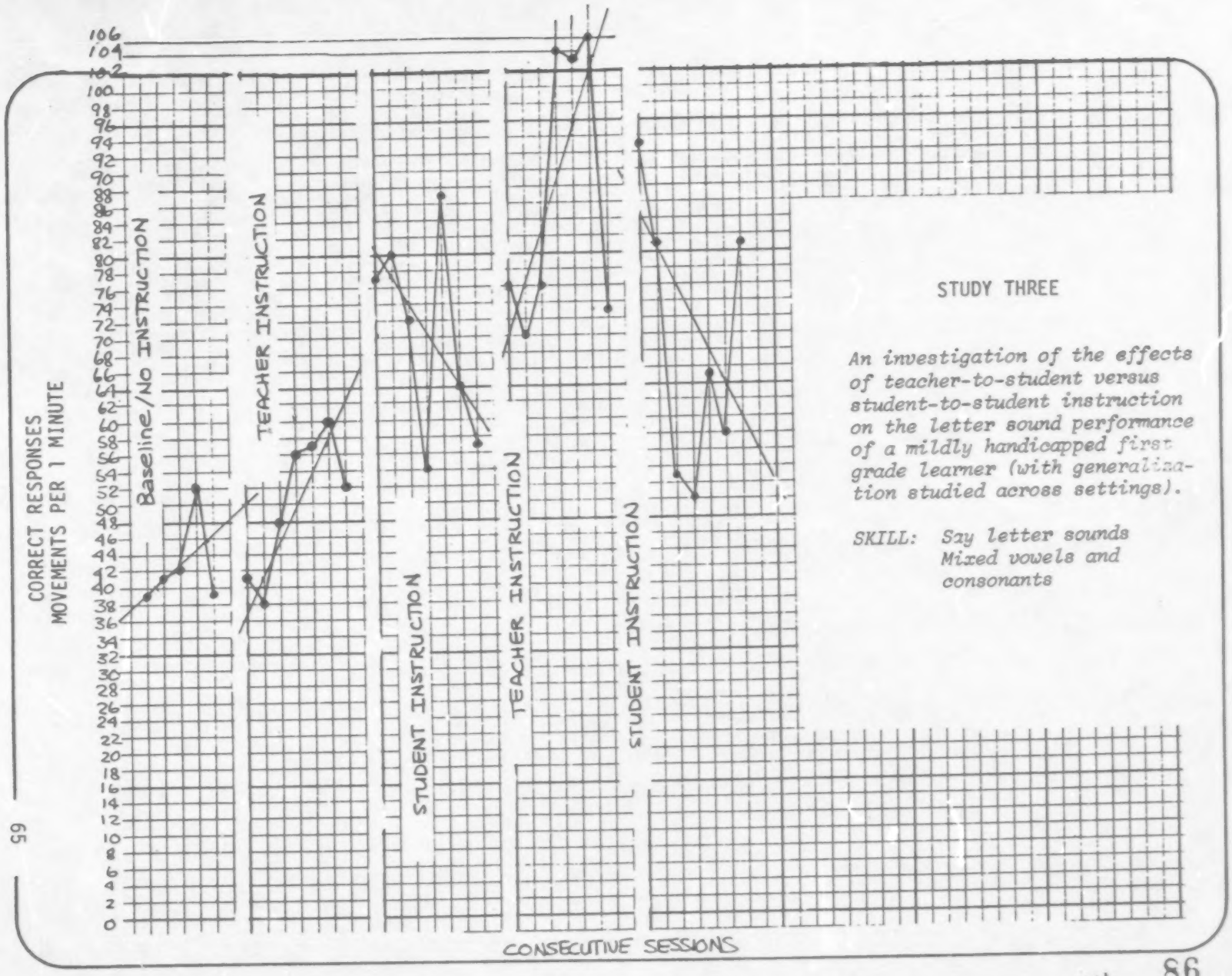
PINPOINT: Say correct letter sounds

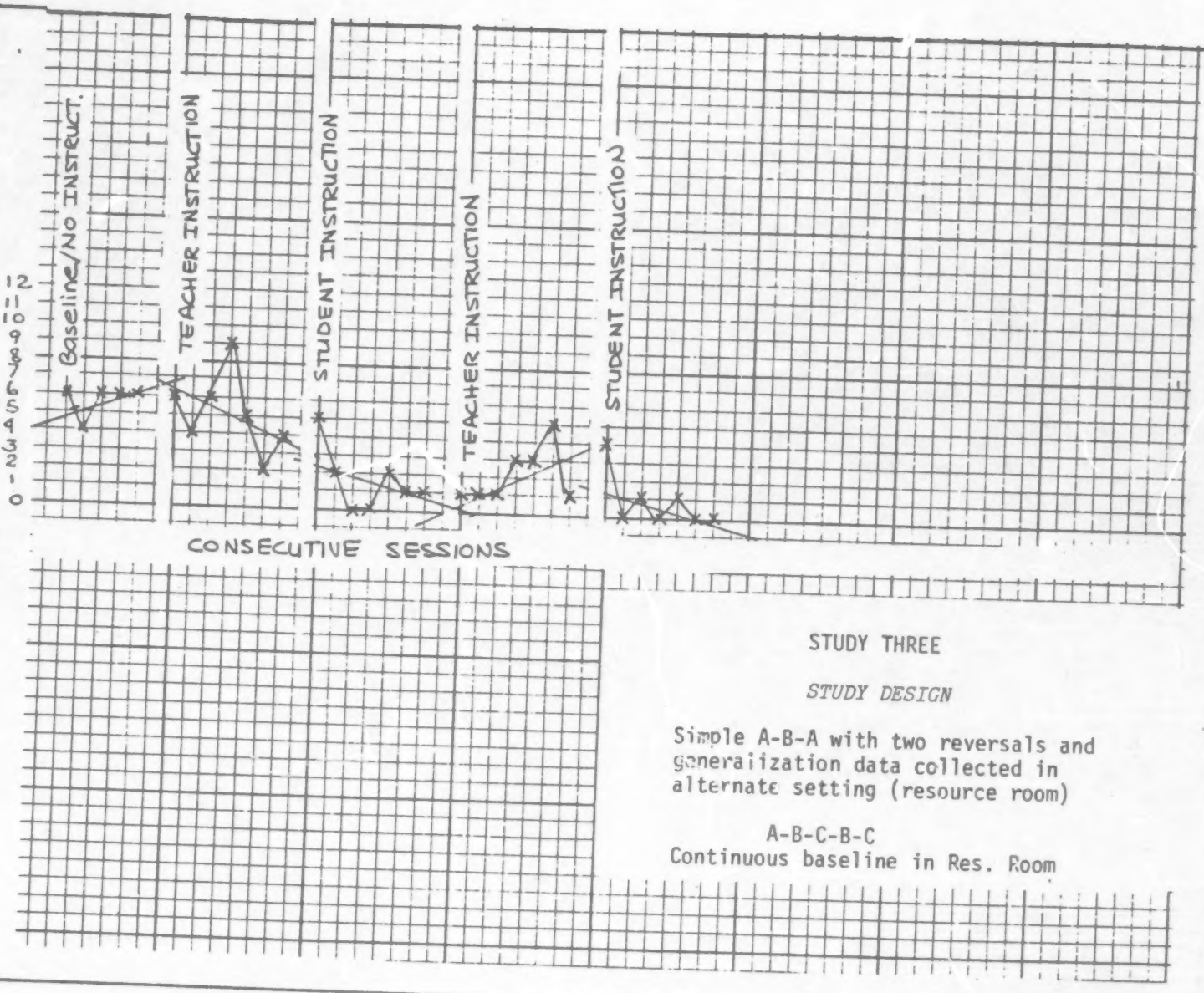
COUNTING GUIDELINES EMPLOYED:

COUNT AS CORRECT: vowels and consonants said correctly; self corrections and hesitations of more than five seconds followed immediately by a correct response.

COUNT AS ERROR: mispronounced vowels and/or consonants; hesitations of more than five seconds; skips; erroneous attempts to self-correct

LENGTH OF DATA COLLECTION PERIODS: 1 minute


CORRECT RESPONSES
MOVEMENTS PER 1 MINUTE
Baseline/NO INSTRUCTION
TEACHER INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
STUDENT INSTRUCTION
CONSECUTIVE SESSIONS
STUDY THREE
An investigation of the effects of teacher-to-student versus student-to-student instruction on the letter sound performance of a mildly handicapped first grade learner (with generalization studied across settings).
SKILL: Say letter sounds
Mixed vowels and consonants

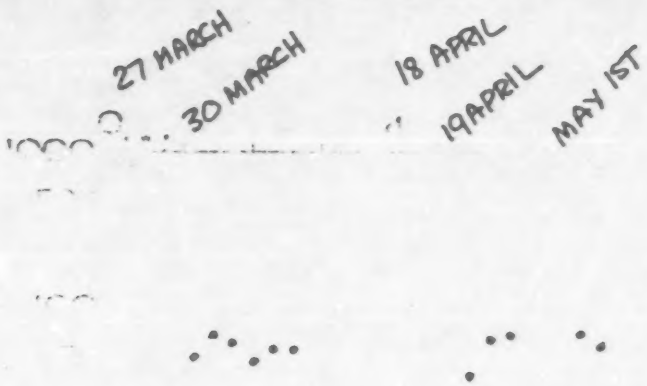


STUDY THREE

STUDY DESIGN

Simple A-B-A with two reversals and generaiization data collected in alternate setting (resource room)

A-B-C-B-C
Continuous baseline in Res. Room



GENERALIZATION STUDY
RESOURCE ROOM/NO INSTRUCTION

67

89

JEFF 1ST GRADE MILOLY HC
SAY LETTER SOUNDS

90

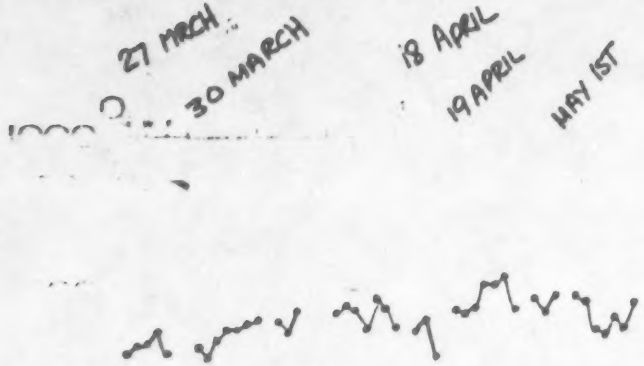
89

91

Generalization study
RESOURCE ROOM PERFORMANCE
/No INSTRUCTION

JEFF IST GRADE MLDLY HC
SAY LETTER SOUNDS

92



69

93

JEFF 1ST GRADE MILDLY HC

SAY LETTER SOUNDS

94

STUDY THREE

AN INVESTIGATION OF THE EFFECTS OF TEACHER-TO-STUDENT INSTRUCTION V. STUDENT-TO-STUDENT INSTRUCTION ON THE LETTER SOUND PERFORMANCE OF A MILDLY HANDICAPPED FIRST GRADE LEARNER (with generalization studied across settings).

DATA SUMMARY INFORMATION

BASELINE

Correct median: 41 Correct slope: x 1.18

Error median: 6 Error slope: x 1.33

FIRST INTERVENTION

Teacher instructed ⊠ *Student instructed* ▱

Correct median: 52 Correct slope: x 1.59

Error median: 5 Error slope: ÷ 1.66

SECOND INTERVENTION

Teacher instructed ▱ *Student instructed* ⊠

Correct median: 72 Correct slope: ÷ 1.32

Error median: 1 Error slope: ÷ 4.00

THIRD INTERVENTION

Teacher instruction ⊠ *Student instructed* ▱

Correct median: 76 Correct slope: x 1.47

Error median: 1 Error slope: x 6.50

FOURTH INTERVENTION

teacher instruted ▱ *Student instructed* ⊠

Correct median: 65 Correct slope: x 1.37

Error median: 0 Error slope: ÷ 1.50

4. *What were the calculated error slopes during TEACHER INSTRUCTION?*

÷ 1.66 and x 6.50

5. *What were the calculated error slopes during STUDENT INSTRUCTION?*

÷ 4.00 and ÷1.50

CONCERNING GENERALIZATION OF THE SKILL FROM ONE SETTING TO ANOTHER:

1. *Did the performance periodically checked in the Resource setting closely approximate the progress made toward increasing corrects and decreasing errors in the regular classroom setting?*

YES ☑ *NO* ☐

CRITICAL QUESTIONS

Study Three

FOR CORRECT RESPONSES

1. *Was the pattern of performance during TEACHER INSTRUCTION consistently better than that of the baseline condition?*

   YES ☒ *NO* ☐

2. *Was the pattern of performance during STUDENT INSTRUCTION Consistently petter than that of the baseline condition?*

   YES ☐ *NO* ☒

3. *Of the two intervention strategies, which evoked the most favorable patterns of performance for correct responses?*

   Teacher instruction ☒
   Student instruction ☐

4. *What were the calculated slopes during TEACHER INSTRUCTION?*

   x 1.59 and x 1.47 *Mean slope:*

5. *What were the calculated slopes during STUDENT INSTRCTION:*

   ÷ 1.32 and x 1.37

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERRORS (median and mean scores)

1. *Was the patter of performance duirng TEACHER INSTRUCTION consistently better than that of the baseline condition?*

   YES ☐ *NO* ☒

2. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the baseline condition?*

   YES ☒ *NO* ☐

3. *Of the two intervention strategies, which evoked the most favorable patterns of performance for correct responses?*

   Teacher instruction ☐
   Student instruction ☑

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Four*

STUDY TITLE: *An Investigation of the effects of student-to student v. teacher-to-student instruction on the acquistion of letter sounds of a moderately handicapped first grade learner in regular and special classroom settings.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Betty Cheeley

SPECIAL CLASS TEACHER: Jane Butler

STUDENT LEARNER (pseudo name): Jeanna

STUDENT TEACHER (pseudo name): Chris

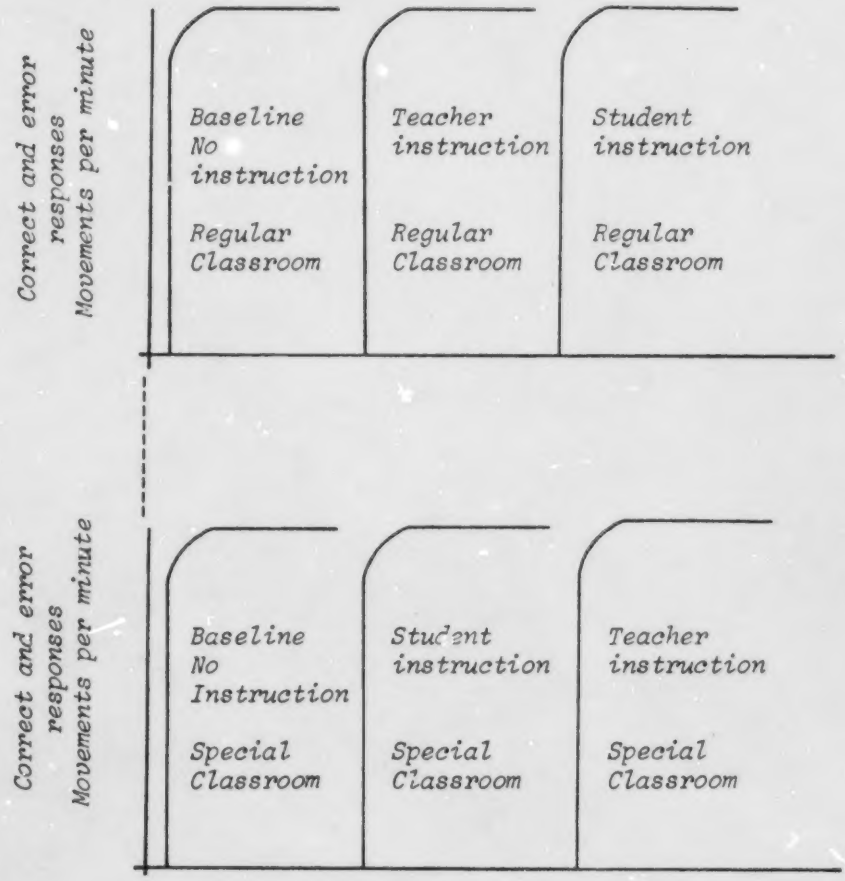
SCHOOL: Ramsey Elementary School, Couer d'Alene, Idaho

STUDY ABSTRACT

The subject of Study Four was a first grade moderatley handicapped child who was learning letter sounds. Analysis of the data collected in two settings (regular and special class settings) indicates that for this learner STUDENT instruction was as effective as NO INSTRUCTION for maintaining an accelerating performance pattern for correct responses but had a negative effect on error performance. TEACHER INSTRUCTION was found to be LESS EFFECTIVE than NO INSTRUCTION and STUDENT-to-STUDENT instruction for increasing desired CORRECT RESPONSES but was the only successful intervention for reducing errors. The findings were consistent across settings.

STUDY DESIGN

Multiple-baseline, single reversal
across settings



Data collector: Kim

Data collection time, Skill Group A - *REGULAR CLASSROOM* 9:40
Data collection time, Skill Group B - *SPECIAL CLASSROOM* 10:20

In this study, the student was instructed in the same skill, "say letter sounds" but in different locations. During Group A instruction, the subject was instructed in the regular classroom and in Group B instruction, in the resource room setting.

SKILL A: Say letter sound (Regular classroom)
SKILL B: Say letter sound (Special classroom)

PINPOINT: Say letter sounds

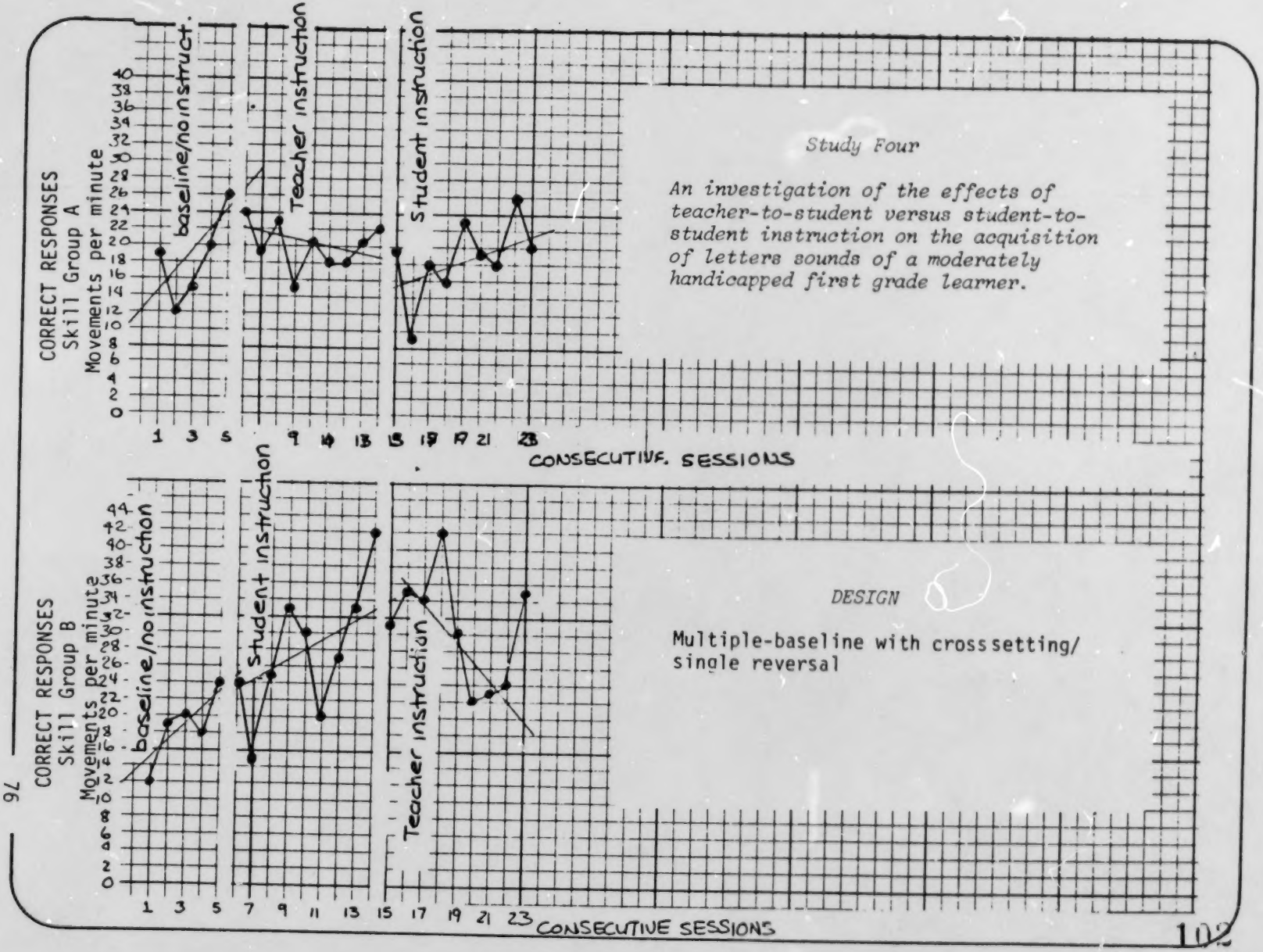
COUNTING GUIDELINES EMPLOYED:

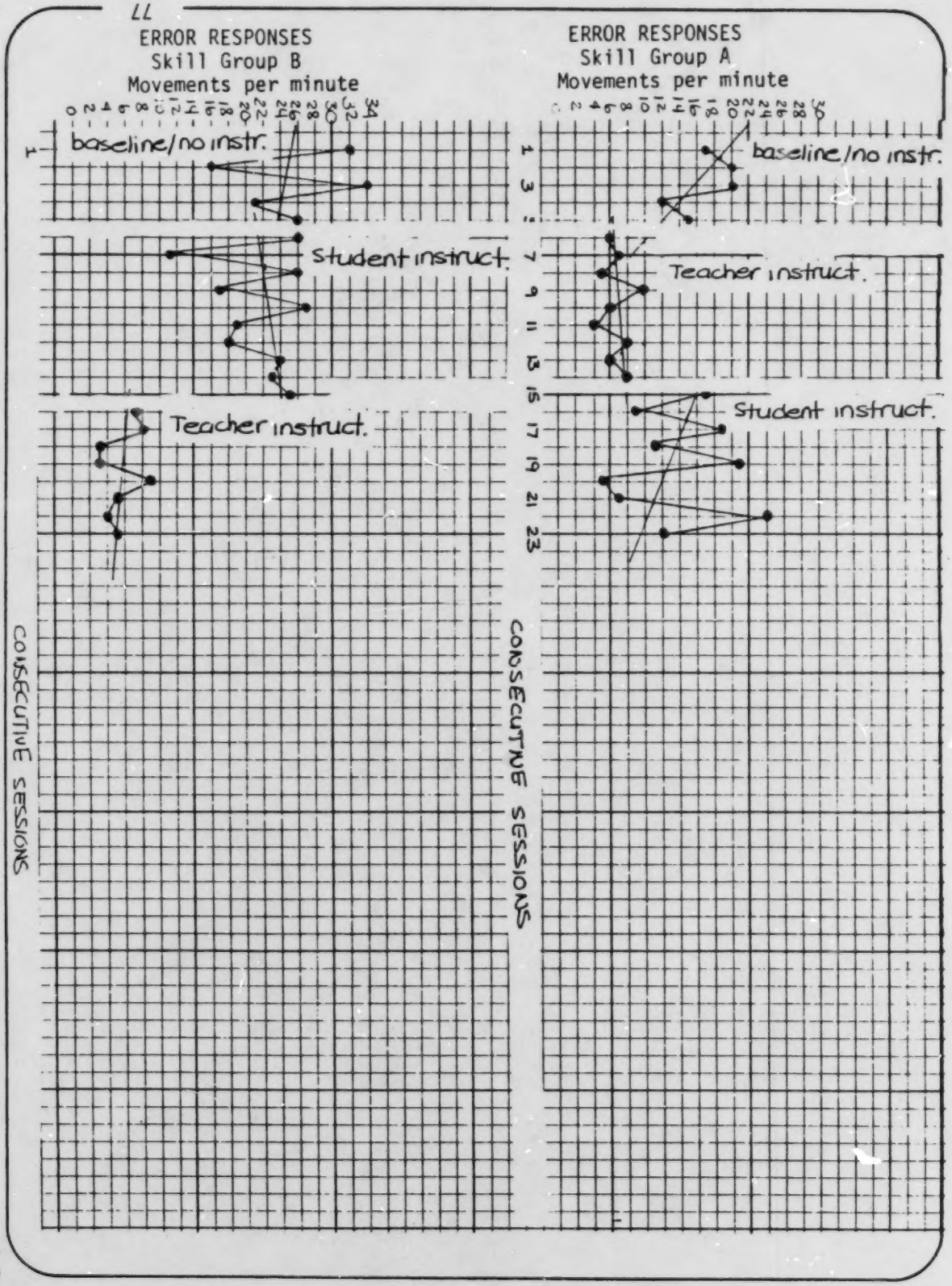
Count as CORRECT: letter sounds said correctly, self-corrections; hesitations of more than five seconds followed by response.

If a student does not know a sound, tell them to move to the next letter after 5 seconds.

Count as ERROR: letter sounds said incorrectly; self-corrections which are errors; hesitations of more than five seconds NOT followed by a correct response.

LENGTH OF DATA COLLECTION PERIOD: 1 minute


CORRECT RESPONSES
Skill Group A
Movements per minute
baseline/no instruct.
Teacher instruction
Student instruction
CONSECUTIVE SESSIONS
Study Four
An investigation of the effects of teacher-to-student versus student-to-student instruction on the acquisition of letters sounds of a moderately handicapped first grade learner.
CORRECT RESPONSES
Skill Group B
Movements per minute
baseline/no instruction
Student instruction
Teacher instruction
CONSECUTIVE SESSIONS
DESIGN
Multiple-baseline with cross setting/ single reversal


LL
ERROR RESPONSES
Skill Group B
Movements per minute
baseline/no instr.
Student instruct.
Teacher instruct.
CONSECUTIVE SESSIONS
ERROR RESPONSES
Skill Group A
Movements per minute
baseline/no instr.
Teacher instruct.
Student instruct.
CONSECUTIVE SESSIONS

STUDY FOUR

AN INVESTIGATION OF THE EFFECTS OF STUDENT-TO-STUDENT V. TEACHER-TO-STUDENT INSTRUCTION ON THE ACQUISITION OF LETTER SOUNDS OF A MODERATELY HANDICAPPED FIRST GRADER IN REGULAR AND SPECIAL CLASS SETTINGS.

DATA SUMMARY INFORMATION

A
BASELINE

Correct median 19 Correct slope x 1.54

Error median 17 Error slope ÷ 1.58

A
FIRST INTERVENTION

Teacher instructed ☑ *Student instructed* ☐

Correct median 21 Correct slope ÷ 1.16

Error median 6 Error slope x 1.3

A
SECOND INTERVENTION

Teacher instructed ☐ *Student instructed* ☑

Correct median 19 Correct slope x 1.40

Error median 12 Error slope ÷ 1.77

B
BASELINE

Correct median 19 Correct slope x 1.53

Error median 26 Error slope ÷ 1.04

DATA SUMMARY INFORMATION
Continued Study 4

B
FIRST INTERVENTION

Teacher instructed ☐		*Student instructed* ☑	
Correct median	27	Correct slope	x 1.54
Error median	23	Error slope	x 1.14

B
SECOND INTERENTION

Teacher instructed ☑		*Student instructed* ☐	
Correct median	31	Correct slope	÷ 1.30
Error median	5	Error slope	÷ 1.40

CRITICAL QUESTIONS
Study Four

FOR CORRECT RESPONSES

1. *Was the pattern of performance during TEACHER instruction consistently better than that of the baseline condition?*

   YES ☐ *NO* ☑

2. *Was the pattern of performance during STUDENT instruction consistently better than that of the baseline condition?*

   YES ☐ *NO* ☐ SAME ☑

3. *What were the calculated slopes during TEACHER INSTRUCTION?*

   ÷1.16 ÷1.30 ____ ____ *Mean slope:* ____

4. *What were the calculated slopes during STUDENT INSTRUCTION?*

   x1.40 x1.54 ____ ____ *Mean slope:* ____

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERRORS (Median and mean):

1. *Was the pattern of performance during TEACHER instruction consistently better than that of the baseline condition?*

   YES ☑ *NO* ☐

2. *Was the pattern of performance during STUDENT instruction consistently better than that of the baseline condition?*

   YES ☐ *NO* ☑

3. *What were the calculated slopes during TEACHER INSTRUCTION?*

   x1.3 ÷1.30 ____ ____ *Mean slope:* ____

4. *What were the calculated slopes during STUDENT INSTRUCTION?*

   ÷1.77 x1.14 ____ ____ *Mean slope:* ____

WERE THE RESULTS CONSISTENT ACROSS SETTINGS? *YES* ☑ *NO* ☐

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMINTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Five*

STUDY TITLE: *An investigation of the effects of Teacher-to student v. Student-to-student instruction on the punctuation skills of a mildly handicapped fourth grader.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Lynn Cunningham

SPECIAL CLASS TEACHER: Jane Bulter

STUDENT LEARNER (pseudo name): Mike

STUDENT TEACHER (pseudo name): Ronnie

SCHOOL: Ramsey Elementary School, Couer d'Alene, Idaho

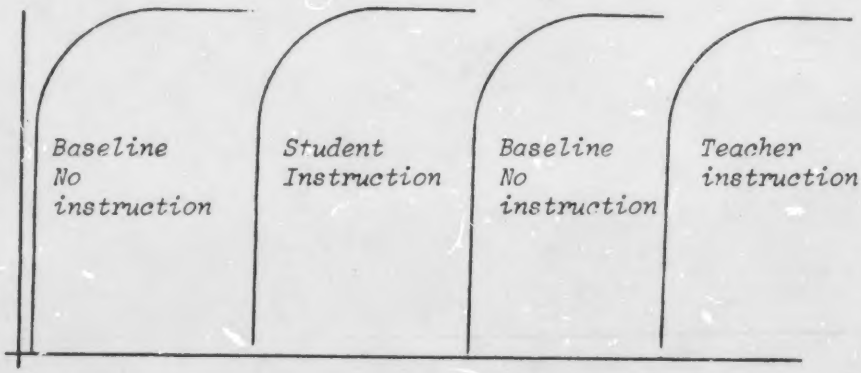
STUDY ABSTRACT

The subject of Study Five was a mildly handicapped fourth grade boy who was learning correct punctuation in a regular classroom setting. Analysis of the data provided through a simple A-B-A-C design indicates that the student's best performance patterns for accelerating CORRECT responses were during periods of NO INSTRUCTION (Student-to-student instruction was found to have the same effect as no instruction as compared with the 2nd baseline condition). Teacher-to-student instruction produced consistently lower patterns of performance for correct responses. As compared to the 1st baseline condition where student errors were decelerating, neither student nor teacher instruction produced a better performance pattern. However, as compared with the 2nd baseline condtion, TEACHER instruction was found to have a positive effect on errors while student instruction maintained exactly the same performance pattern.

STUDY DESIGN

Simple A-B-A-C

Skill: *Correctly punctuate sentences*



DATA COLLECTOR: Kim

DATA COLLECTION TIME: 10:50 daily

DATA AND SESSION LOCATION: Regular classroom

SKILL: Correctly punctuate "mis-sentences"

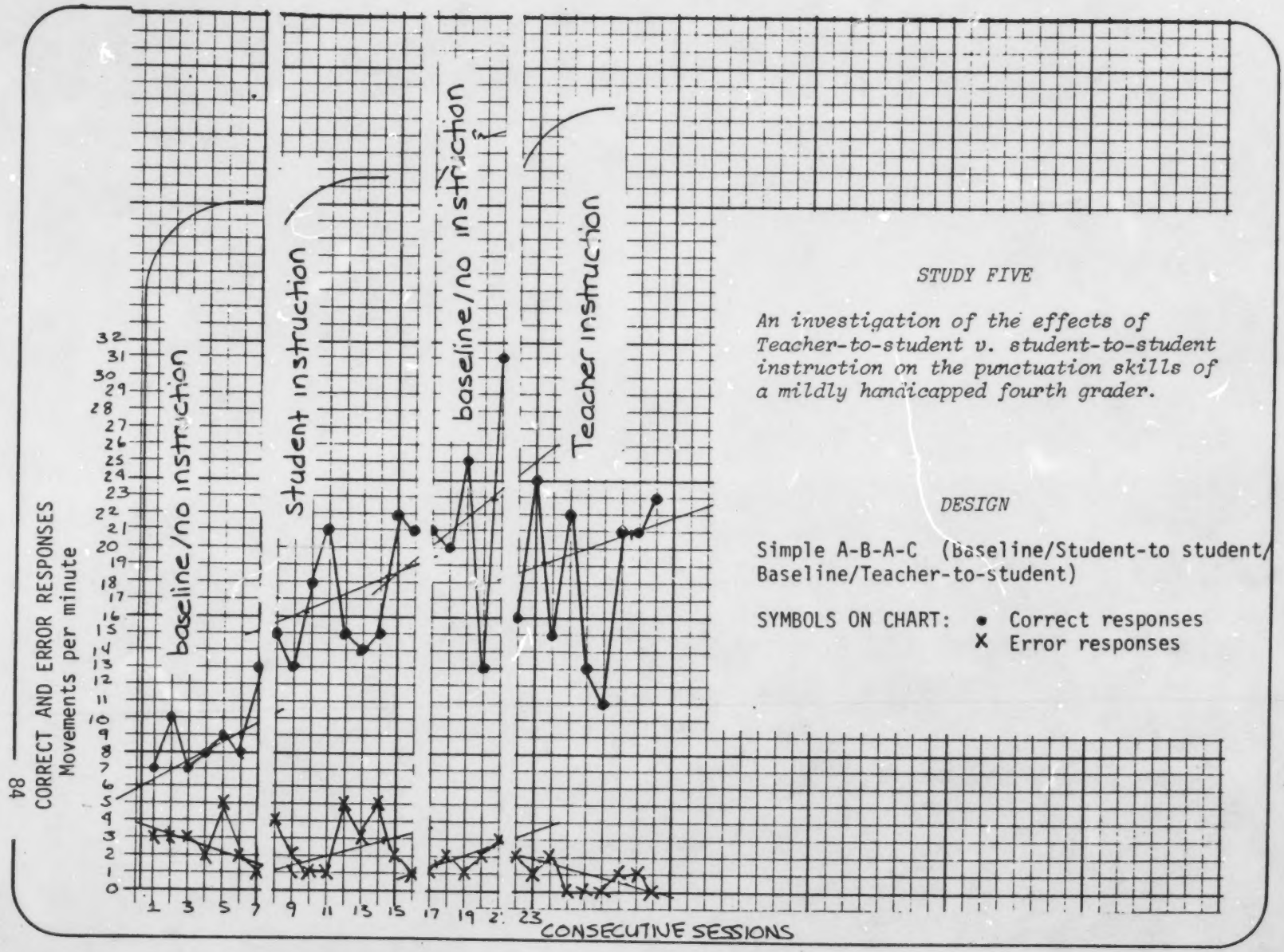
PINPOINT: Student enters correct punctuation (capital, period, etc.)

COUNTING GUIDELINES EMPLOYED:

COUNT AS CORRECT all correctly capitalized word (Sentence beginnings and proper nouns), correctly placed sentence endings (question marks, periods, exclaimation points, etc.)

COUNT AS ERROR all incorrectly placed punctuation marks and capitalization points made; also, all punctuation NOT ENTERED within the work completed during the one-minute data collection period.

LENGTH OF DATA COLLECT/COUNT PERIOD: 1 minute


baseline/no instruction
Student instruction
baseline/no instruction
Teacher instruction
CORRECT AND ERROR RESPONSES
Movements per minute
CONSECUTIVE SESSIONS
STUDY FIVE
An investigation of the effects of Teacher-to-student v. student-to-student instruction on the punctuation skills of a mildly handicapped fourth grader.
DESIGN
Simple A-B-A-C (Baseline/Student-to student/ Baseline/Teacher-to-student)
SYMBOLS ON CHART: • Correct responses
X Error responses

STUDY FIVE

AN INVESTIGATION OF THE EFFECTS OF TEACHER-TO-STUDENT V. STUDENT-TO-STUDENT INSTRUCTION ON THE PUNCTUATION SKILLS OF A MILDLY HANDICAPPED FOURTH GRADER

DATA SUMMARY INFORMATION

BASELINE 1

Correct median: 8 Correct slope: x1.43

Error median: 3 Error slope: ÷ 3.0

FIRST INTERVENTION

Teacher instructed ☐ *Student instructed* ☑

Correct median: 15 Correct slope: x1.2

Error median: 2 Error slope: x3.0

BASELINE 2

Correct median: 21 Correct slope: x1.2

Error median: 2 Error slope: x3.0

SECOND INTERVENTION

Teacher instructed ☑ *Student instructed* ☐

Correct median: 16 Correct slope: x1.10

Error median: 1 Error slope: ÷ 2.0

CRITICAL QUESTIONS
Study Five

FOR CORRECT RESPONSES

1. *Was the pattern of performance during TEACHER INSTRUCTION consistently better than that of the 1st baseline condition?*

   YES ☐ *NO* ☑

2. *Was the pattern of performance during TEACHER INSTRUCTION consistently better than that of the 2nd baseline condition?*

   YES ☐ *NO* ☑

3. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the 1st baseline condition?*

   YES ☐ *NO* ☑

4. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the 2nd baseline condition?*

   YES ☐ *NO* ☐ SAME ☑

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERRORS (Median and mean)

1. *Was the pattern of performance during TEACHER INSTRUCTION consistently better than that of the 1st baseline condition?*

   YES ☐ *NO* ☑

2. *Was the pattern of performance during TEACHER INSTRUCTION consistently bettern than that of the 2nd baseline condition?*

   YES ☑ *NO* ☐

3. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the 1st intervention?*

   YES ☐ *NO* ☑

4. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the 2nd intervention?*

   YES ☐ *NO* ☐ SAME ☑

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Six*

STUDY TITLE: *An Investigation of the effects of student versus teacher instruction of the reading performance of a 5th grade, mildly handicapped boy.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Gwen Urbanac

SPECIAL CLASS TEACHER: Linda Knowles

STUDENT LEARNER (pseudo name): Chris

STUDENT TEACHER (pseudo name): Davey

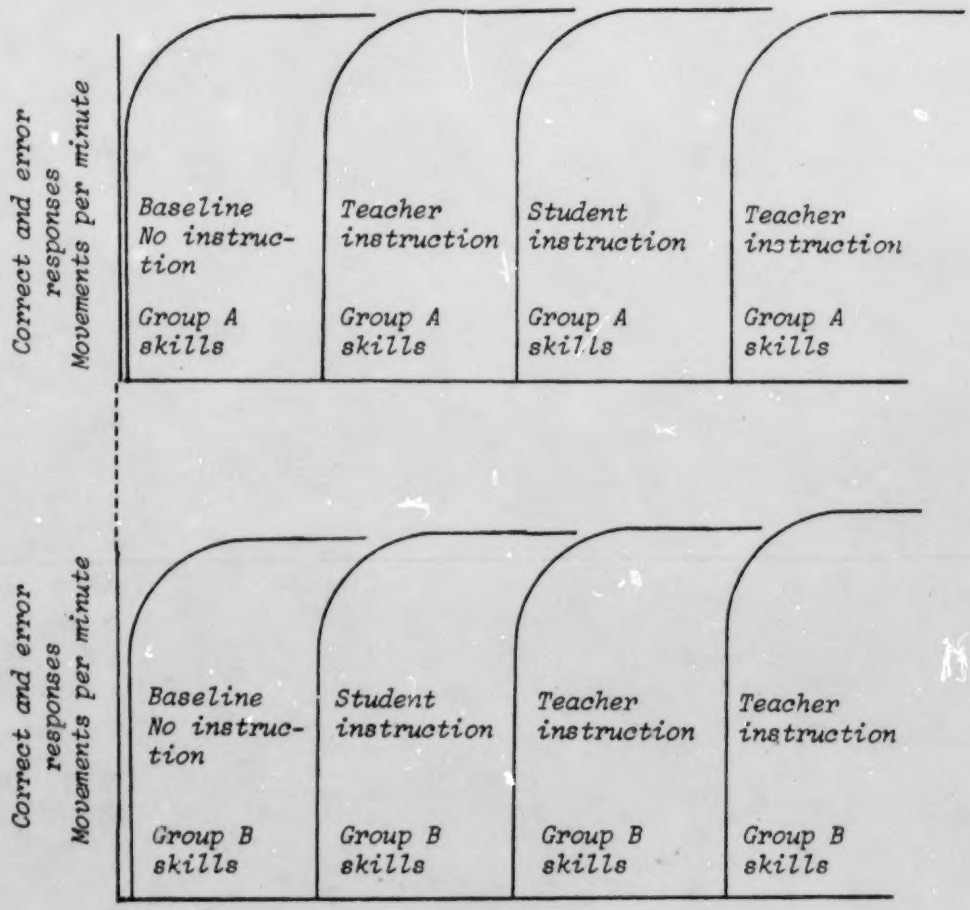
SCHOOL: Hayden Lake Elementary, Couer d'Alene, Idaho

STUDY ABSTRACT

Study Six investigates the correct and error performance of a mildly handicapped learner during no instruction, teacher-to-student instruction and student-to-student instruction. At the time of the study, the subject was placed full time in a regular classroom setting with recommendations pending for support in a resource setting. Analysis of the data indicate that performance patterns for correct and error reponses were positive during all phases of teacher to student instruction and in all but one phase with student-to-student instruction (a slight rise in error performance).

STUDY DESIGN

Multiple-baseline with
internal and cross skill reversals



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Data collector: Carline

Data collection time Skill A: 10:00 - 10:10
Data collection time Skill B: 12:10 - 12:20

Skill: Say words- Wilson's Essential Vocabulary
Group A words (randomized collection)
Group B words (randomized collection)

PINPOINT: Say words

Counting guidelines employed:

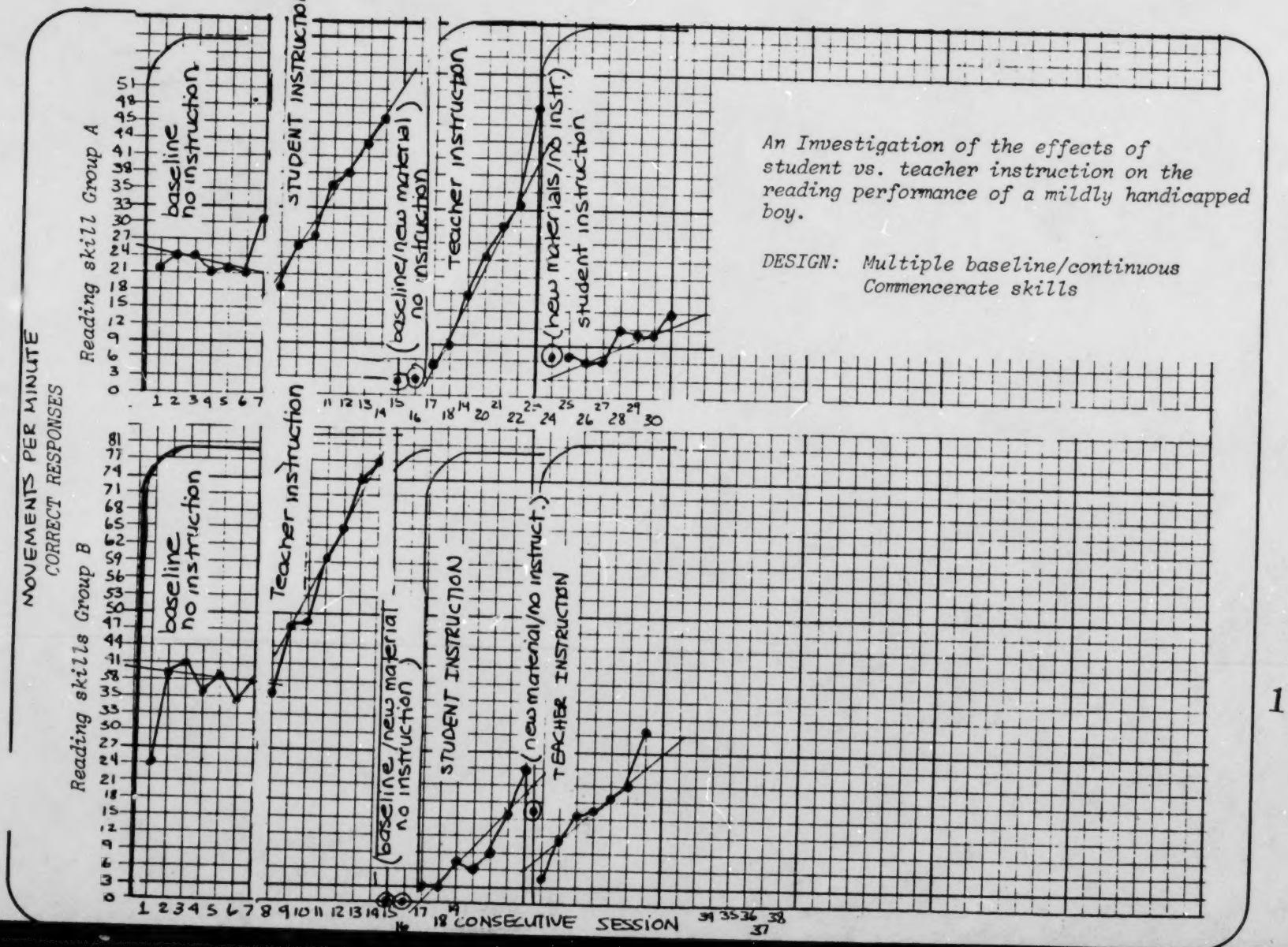
COUNTED AS CORRECT: words say correctly; self-corrections; hestiation followed by correct word

COUNTED AS ERROR: Omission or words intentially skipped, hesitations more than 5 seconds not followed by correct responses; misread words

PROBE DELIVERY GUIDELINES:

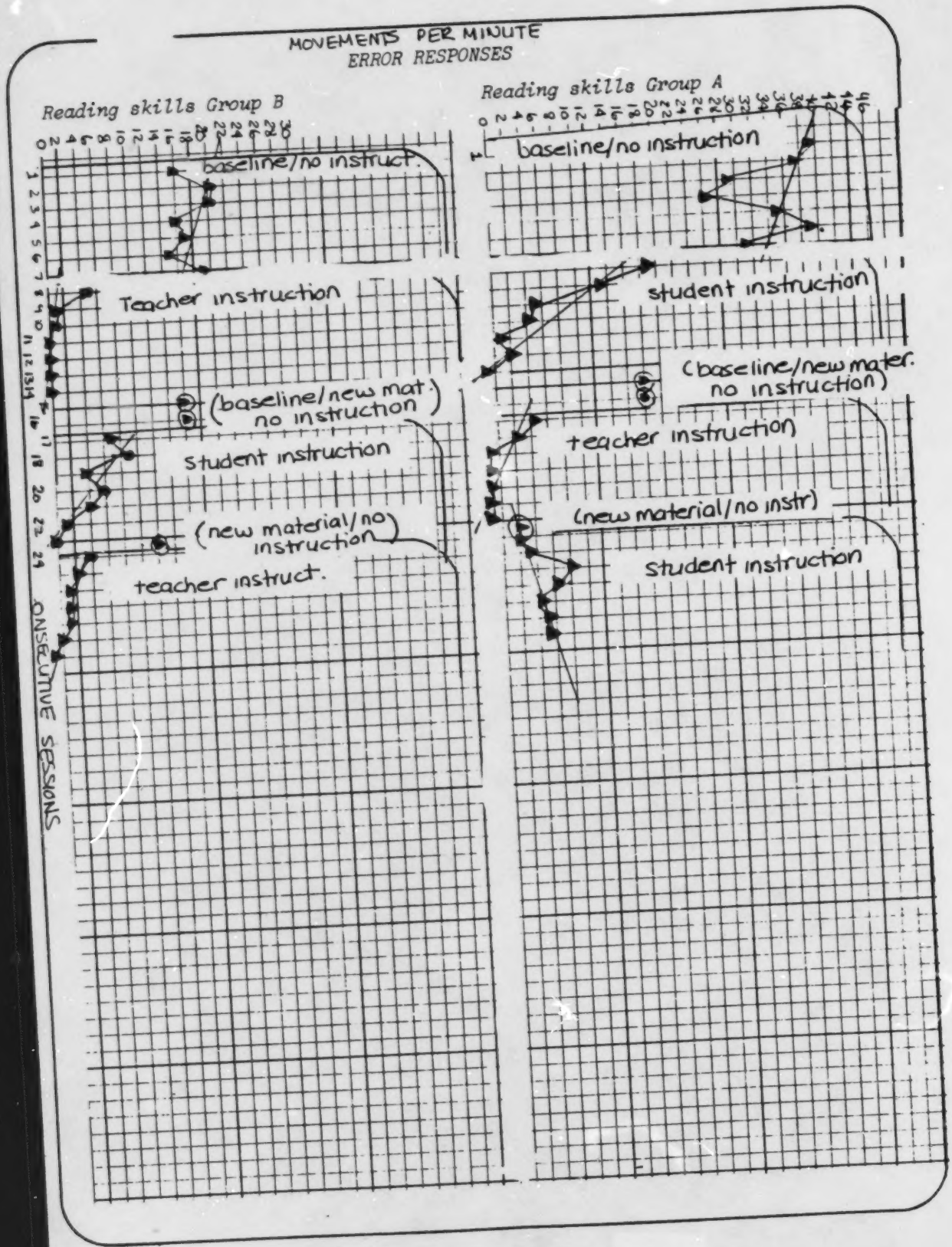
Each day during baseline, give Chris the correct probe sheet. Tell him to read as many words as he can in the one minute you will give him. Tell him to start where you put the starting point (your finger or a marker). The starting place should change from day to day. Tell him if he doesn't know a word to say so and go on to the next word. Do not let him skip around on the page. Remind him that skipped words will be counted as an error.

DO NOT PROVIDE OTHER ANY FEEDBACK DURING BASELINE CONDITIONS OR INTERVENTION CONDITIONS other than "thanks", "thanks for working, today" etc.



An Investigation of the effects of student vs. teacher instruction on the reading performance of a mildly handicapped boy.

DESIGN: Multiple baseline/continuous Commencerate skills


MOVEMENTS PER MINUTE
ERROR RESPONSES
Reading skills Group B
baseline/no instruct.
Teacher instruction
(baseline/new mat. no instruction)
student instruction
(new material/no instruction)
teacher instruct.
Reading skills Group A
baseline/no instruction
student instruction
(baseline/new mater. no instruction)
teacher instruction
(new material/no instr)
student instruction
CONSECUTIVE SESSIONS

STUDY SIX

AN INVESTIGATION OF THE EFFECTS OF STUDENT VS. TEACHER INSTRUCTION ON THE READING PERFORMANCE OF MILDLY HANDICAPPED BOY IN REGULAR CLASSOOM SETTINGS.

DATA SUMMARY INFORMATION

A

BASELINE

Correct median 24 Correct slope ÷ 1.16

Error median 36 Error slope ÷ 1.17

A

FIRST INTERVENTION

Teacher instructed ☐ *student instructed* ☑

Correct median 36 Correct slope X 2.31

Error median 5 Error slope ÷ 16.0

A

SECOND INTERVENTION

Teacher instructed ☑ *student instructed* ☐

Correct median 22 Correct slope X 12.66

Error median 0 Error slope ÷ 3.0

A

THIRD INTERVENTION

Teacher instructed ☐ *student instructed* ☑

Correct median 11 Correct slope X 3.0

Error median 6 Error slope X 3.0

DATA SUMMARY INFORMATION
Continued Study 6

B

BASELINE

Correct median 38 Correct slope 1.0

Error median 18 Error slope ÷1.23

B
FIRST INTERVENTION

Teacher instructed ☑ *student instructed* ☐

Correct median 57 Correct slope x2.76

Error median 0 Error slope 1.0

B
SECOND INTERVENTION

Teacher instructed ☐ *student instructed* ☑

Correct median 7 Correct slope x 19

Error median 4 Error slope ÷9

B
THIRD INTERVENTION

Teacher instructed ☑ *student instructed* ☐

Correct median 17 Correct slope x3.0

Error median 2 Error slope ÷4.0

CRITICAL QUESTIONS
Study Six

FOR CORRECT RESPONSES

1. *Was the pattern of performance during TEACHER instruction better than that of the baseline condition?* consistently — *YES* ☑ *NO* ☐

2. *Was the pattern of performance during STUDENT insturction better than that of the baseline condition?* consistently — *YES* ☑ *NO* ☐

3. *What were calculated slopes during TEACHER INSTRUCTION?*

   ×12.66 ×2.76 ×3.0 ____ *Mean slope:* ____

4. *What were the calculated slopes during STUDENT INSTRUCTION?*

   ×2.31 ×3.0 ×19.0 ____ *Mean slope:* ____

FOR ERROR RESPONSES

Considering the position of the errors,

1. *Was the pattern of performance during TEACHER instruction better than that of the baseline condition?* consistently — *YES* ☑ *NO* ☐

2. *Was the pattern of performance during STUDENT instruction better than of the baseline condition ?* consistenly — *YES* ☐ *NO* ☑

3. *What were the calculated slopes during TEACHER INSTRUCTION?*

   ÷3.0 1.0 ÷4.0 ____ *Mean slope:* ____

4. *What were the calculated slopes during STUDENT INSTRUCTION?*

   ÷16.0 ×3.0 ÷9.0 ____ *Mean slope:* ____

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Seven*

STUDY TITLE: *An investigation of the effects of student-to student v. teacher-to-student instruction on the multiplication and division performance of a 5th grade learner.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Jean Pittsley

SPECIAL CLASS TEACHER: Linda Knowles

STUDENT LEARNER (pseudo name): Chris

STUDENT TEACHER (pseudo name): Val

SCHOOL: Hayden Lake Elementary School, Hayden Lake, Idaho

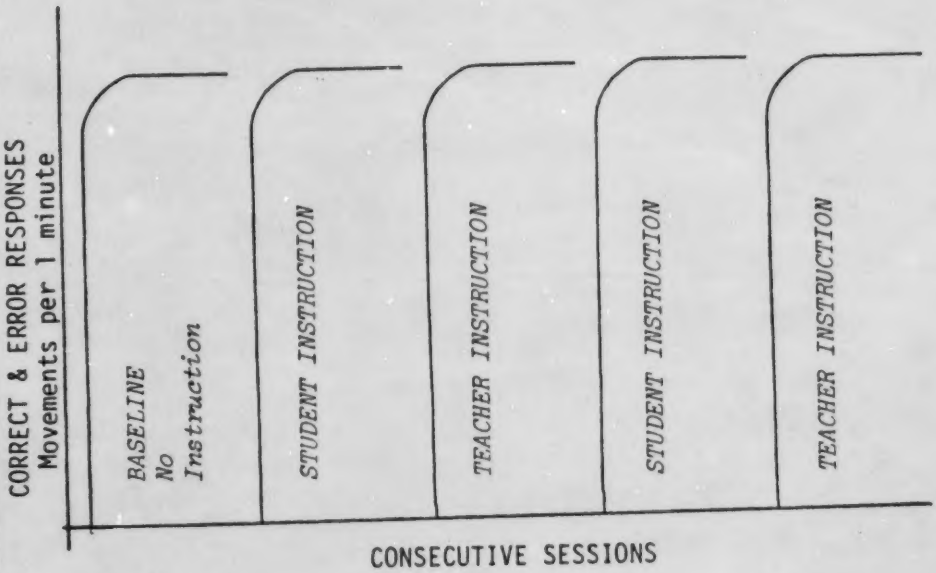
STUDY ABSTRACT

The subject of Study Seven was a 5th grade learner who was studying multiplication and division problems. During the course of the study he was taught by both his classroom teacher and peer who was trained to deliver instruction. Analysis of the correct data indicate that the learner's best performance pattern was during the condition of NO INSTRUCTION - that student-to-student instruction produced appropriately accelerating patterns (though slighter) and that teacher-to-student instruction produced negative patterns of performance for correct responses. Analysis of error data reveals that both student and teacher instruction were effective for producing better error patterns: teacher instruction produced more severe performance pattern decreases than student instruction - lower mean and median scores.

STUDY DESIGN

Simple A-B-A with reversal

A-B-C-B-C



DATA COLLECTORS: Carline
Ethel

DATA COLLECTION TIMES: Daily 9:15 - 9:25
Daily 1:35 - 1:45

SKILL: Write answers to multiplication and division problems

PINPOINT: Writes digits and computational marks

COUNTING GUIDELINES EMPLOYED:

COUNT AS CORRECT each correct DIGIT and computation MARK in a problem (see answer sheet for possible points per problem); count as correct each self correction.

COUNT AS ERROR digits or computational marks in error; illegible answers. DO NOT COUNT SKIPS AS ERRORS UNLESS THE PROBLEM HAS BEEN "X-ED" OUT. Each "X" equals only "1" error. (See answer guide for sample).

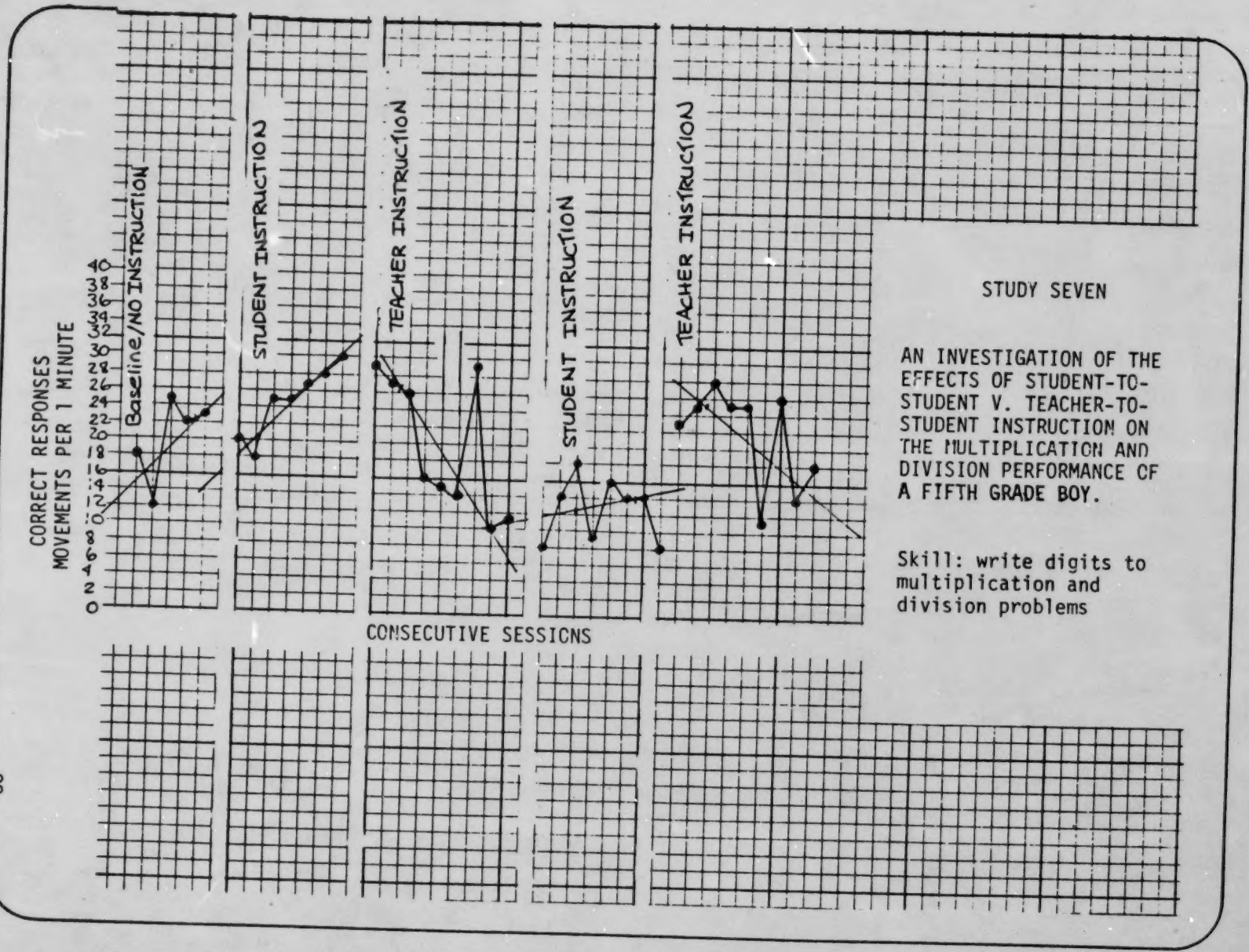
DELIVERING THE PROBE:

Each day during the baseline condition, ask Chris to work as many problems as he can. Tell him to put an "X" on the problems he cannot work and instruct him to move to the next problem.

Do not provide any feedback during baseline conditions.

YOU MAY tell the student to start in a different place each day during baseline and throughout the study. Be sure to mark staring and stoping points on the daily probe sheets.

LENGTH OF PROBE PERIOD: 1 MINUTE


CORRECT RESPONSES
MOVEMENTS PER 1 MINUTE
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40
Baseline/NO INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
CONSECUTIVE SESSIONS
86

STUDY SEVEN

AN INVESTIGATION OF THE EFFECTS OF STUDENT-TO-STUDENT V. TEACHER-TO-STUDENT INSTRUCTION ON THE MULTIPLICATION AND DIVISION PERFORMANCE OF A FIFTH GRADE BOY.

Skill: write digits to multiplication and division problems

ERROR RESPONSES
MOVEMENTS PER MINUTE
Baseline/NO INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
CONSECUTIVE SESSIONS
STUDY DESIGN
Simple A-B-A with reversal
A-B-C-B-C

66

STUDY SEVEN

An Investigation of the Effects of Student-to-Student Instruction v. Teacher-to-Student Instruction on the Multiplication and Division Performance of a 5th Grade Learner.

DATA SUMMARY INFORMATION

BASELINE

Correct median: 22 Correct slope: x 1.53

Error median: 25 Error slope: x 2.00

FIRST INTERVENTION

Teacher instructed ▱ *Student instructed* /x/

Correct median: 25 Correct slope: x 1.66

Error median: 26 Error slope: x 1.33

SECOND INTERVETION

Teacher instructed /x/ *Student instructed* /▱/

Correct median: 16 Correct slope: ÷ 3.00

Error median: 17 Error slope: ÷ 4.28

THIRD INTERVENTION

Teacher instructed ▱ *Student instructed* /x/

Correct median: 14 Correct slope: x 1.27

Error median: 8.5 Error slope: x 1.12

FOURTH INTERVENTION

Teacher instructed /x/ *Student instructed* ▱

Correct median: 23 Correct slope: ÷ 1.86

Error median: 28 Error slope: ÷ 1.63

100

CRITICAL QUESTIONS

Study Seven

FOR CORRECT RESPONSES

1. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the performance during the baseline condition?*

   YES ☐ *NO* ☒

2. *Was the pattern of performance duirng TEACHER INSTRUCTION consistently better than that of the performance during the baseline condition?*

   YES ☐ *NO* ☒

3. *What was the calculated slope for the baseline condition?*

   x 1.53

4. *What were the calculated slopes during the two phases of STUDENT INSTRUCTION?*

   x 1.66 and x 1.27

5. *What were the calculated slopes during the two phases of TEACHER INSTRUCTION?*

   ÷ 3.00 and ÷ 1.86

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERRORS (median and mean scores)

1. *Was the pattern of performance duirng STUDENT INSTRUCTION consistently better than that of the baseline condition?*

   YES ☒ *NO* ☐

2. *Was the pattern of performance during TEACHER INSTRUCTION consistnetly better than that of the baseline condtion?*

   YES ☒ *NO* ☐

3. *What was the calculated slope during the baseline condition?*

x 2.00

4. *What were th calculated slopes during the two phases of STUDENT INSTRUCTION?*

x 1.33 and x 1.12

5. *What were the calculated slopes during the two phases of TEACHER INSTRUCTION?*

÷ 4.28 and ÷ 1.63

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Eight*

STUDY TITLE: *An investigation of the effects of Student-to student v. teacher-to-student instruction on the division performance of a 5th grade learner.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Jean Pittsley

SPECIAL CLASS TEACHER: Linda Knowles

STUDENT LEARNER (pseudo name): Bill

STUDENT TEACHER (pseudo name): Carl

SCHOOL: Hayden Lake Elementary School, Hayden Lake, Idaho

STUDY ABSTRACT

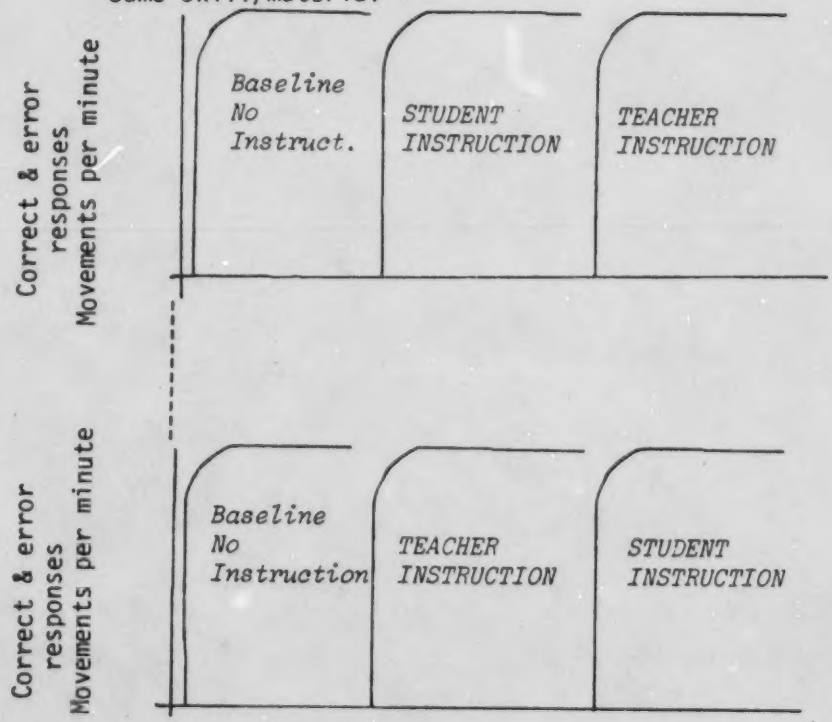
The subject of this multiple baseline, external reversal designed study was a fifth grade mildly handicapped learner charged with learning division computation. During the course of the study, the subject received instruction daily from his classroom teacher (teacher-to-student instruction) and from a friend trained in the art of instruction (student-to-student instruction). Analysis of the data show that the student demonstrated the best performance patterns for both correct and error responses during conditions of NO INSTRUCTION though correct responses were effected positively during ONE phase of student-to-student instruction.

STUDY EIGHT

DESIGN

Simple Applied Behavior Analysis Multiple baseline with external reversal:
A-B-C
A-C-B

Same skill/material



STUDY EIGHT

DATA COLLECTORS: Carline
Ethel

DATA COLLECTION TIMES: 9:15 - 9:25
1:35 - 1:45

SKILL: Write answers to division problems

PINPOINT: WRITES DIGITS AND COMPUTATIONAL MARKS

COUNTING GUIDELINES:

COUNT AS CORRECT each correct DIGIT and computation mark in a problem; count as correct each self-correction.

COUNT AS ERROR digits or computational marks in error and illegiable answers. DO NOT COUNT SKIPS AS ERRORS UNLESS THE PROBLEM HAS BEEN "X-ED" OUT. Each "X" equals only 1 error.

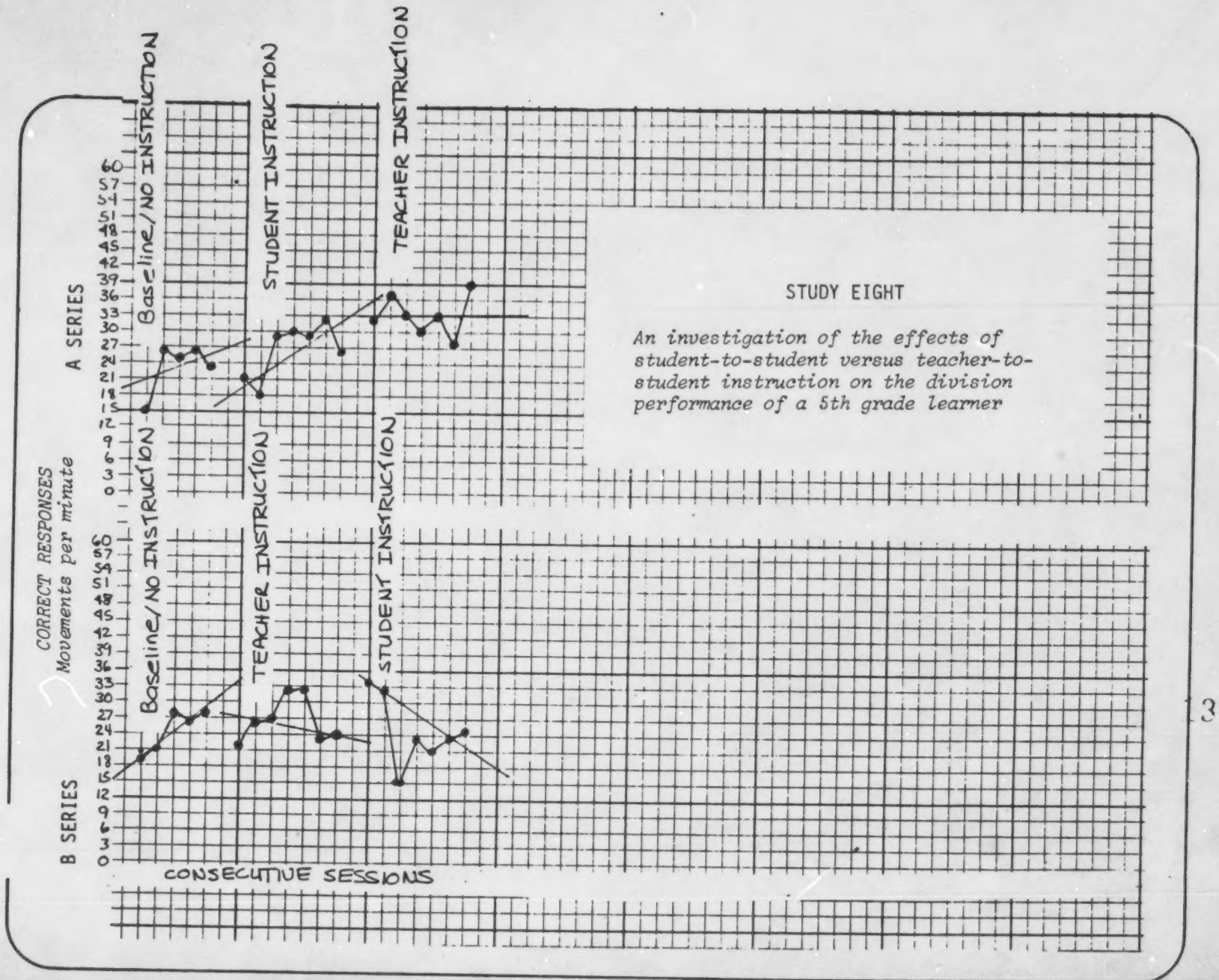
DELIVERING THE PROBE:

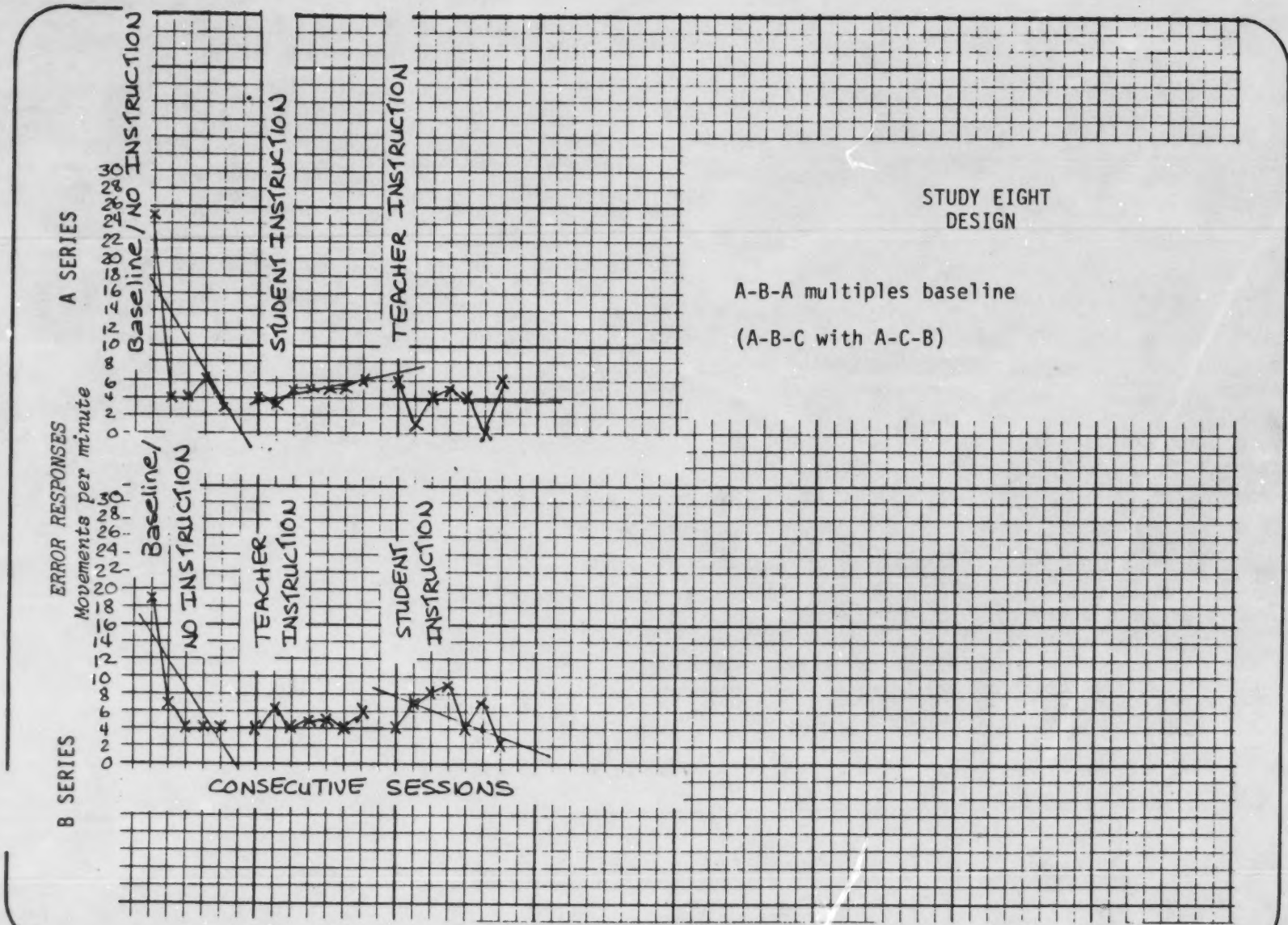
Each day during a phase ask Bill to work as many problems as he can during the 1 minute period. Tell him to put an "X" on problems he does not know how to work. Tell him to go to the 2nd page if he finishes the first.

Do not provide any feedback duirng the conditions.

You many tell the student to start in a different place each day during baseline and throughout the study. Be sure to mark starting and stopping points.

Save all data and work sheets


STUDY EIGHT
An investigation of the effects of student-to-student versus teacher-to-student instruction on the division performance of a 5th grade learner
A SERIES
B SERIES
CORRECT RESPONSES
Movements per minute
Baseline/NO INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
CONSECUTIVE SESSIONS


STUDY EIGHT
DESIGN
A-B-A multiples baseline
(A-B-C with A-C-B)
A SERIES
B SERIES
ERROR RESPONSES
Movements per minute
Baseline/NO INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
Baseline/
NO INSTRUCTION
TEACHER
INSTRUCTION
STUDENT
INSTRUCTION
CONSECUTIVE SESSIONS

STUDY EIGHT

SUMMARY INFORMATION

PHASE	*Correct mean*	*Correct slope*	*Error mean*	*Error slope*
Baseline A SERIES	25	x 1.31	4	÷ 5.33
Baseline B SERIES	26	x 1.61	4	÷ 7.50
STUDENT INSTRUCT A SERIES	29	x 1.68	5	x 1.50
STUDENT INSTRUCT B SERIES	23	÷ 1.54	7	÷ 2.66
TEACHER INSTRUCT A SERIES	33	x 1.00	4	x 1.00
TEACHER INSTRUCT B SERIES	26	÷ 1.12	4	x 1.00

STUDY EIGHT

CRITICAL QUESTIONS

FOR CORRECT RESPONSES

1. *Was the pattern of performance during STUDENT INSTRUCTION (Series A) consistently better than the baseline performance pattern?*

   YES ☒ *NO* ☐

2. *Was the pattern of performance during STUDENT INSTRUCTION (Series B) consistently better than the baseline performance pattern?*

   YES ☐ *NO* ☒

3. *Was the pattern of performance during TEACHER INSTRUCTION (Series A) consistently better than the baseline performance pattern?*

   YES ☐ *NO* ☒

4. *Was the pattern of performance during TEACHER INSTRUCTION (Series B) better than the performance pattern of the baseline condition?*

   YES ☐ *NO* ☒

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERROR (mean and median scores)

1. *Was the pattern of performance during STUDENT INSTRUCTION (Series A) better than that of the baseline condition?*

   YES ☐ *NO* ☒

2. *Was the pattern of performance during STUDENT INSTRUCTION (Series B) better than that of the baseline condition ?*

   YES ☐ *NO* ☒

3. *Was the pattern of performance during TEACHER INSTRUCTION (Series B) better than that of the baseline condition?*

   YES ☐ *NO* ☒

4. *Was the pattern of performance during TEACHER INSTRUCTION (Series B) better than that of the baseline condition?*

   YES ☐ *NO* ☒

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Study Nine*

STUDY TITLE: *An investigation of the effects of student-to-student instruction v. teacher-to-student instruction on the spelling performance of a mildly handicapped first grade learner.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Vicki Sims

SPECIAL CLASS TEACHER: Linda Knowles

STUDENT LEARNER (pseudo name): Sherry

STUDENT TEACHER (pseudo name): Becky

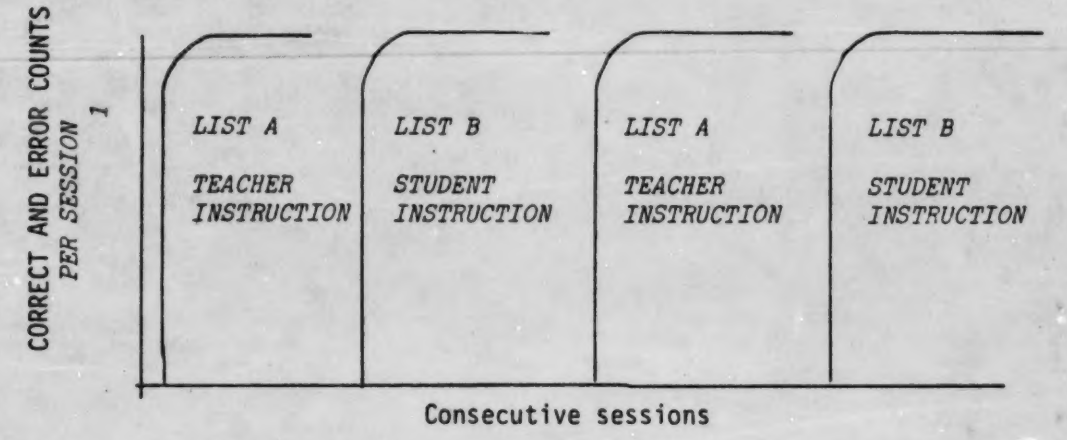
SCHOOL: Hayden Lake Elementary School, Hayden Lake, Idaho

STUDY ABSTRACT

The subject of the ninth study in the series was a mildly handicapped first grade girl who received instruction on unknown spelling words from her classroom teacher and student trained friend. Analysis of the data indicate that the number of words learned to criteria (cumulative) per phase was significantly greater under teacher-to-student instruction than student-to-student instruction. Analysis of performance patterns, however, reveals that both interventions had positive and negative effects on the PATTERN of performance at different times.

STUDY NINE

DESIGN



1. *Data also recorded as cumulative words learned to criteria (correct two consecutive days) per session*

DATA COLLECTOR: Ethel

DATA COLLECTION TIMES: 1:25 - 1:35 and 2:15 - 2:25
Daily

SKILL: Spelling

PINPOINT: Write or print word correctly

COUNTING GUIDELINES:

COUNT AS CORRECT each word spelled correctly; each self-corrected word

COUNT AS ERROR each word spelled incorrectly, words partially attempted but not completed and illegiabily written words.

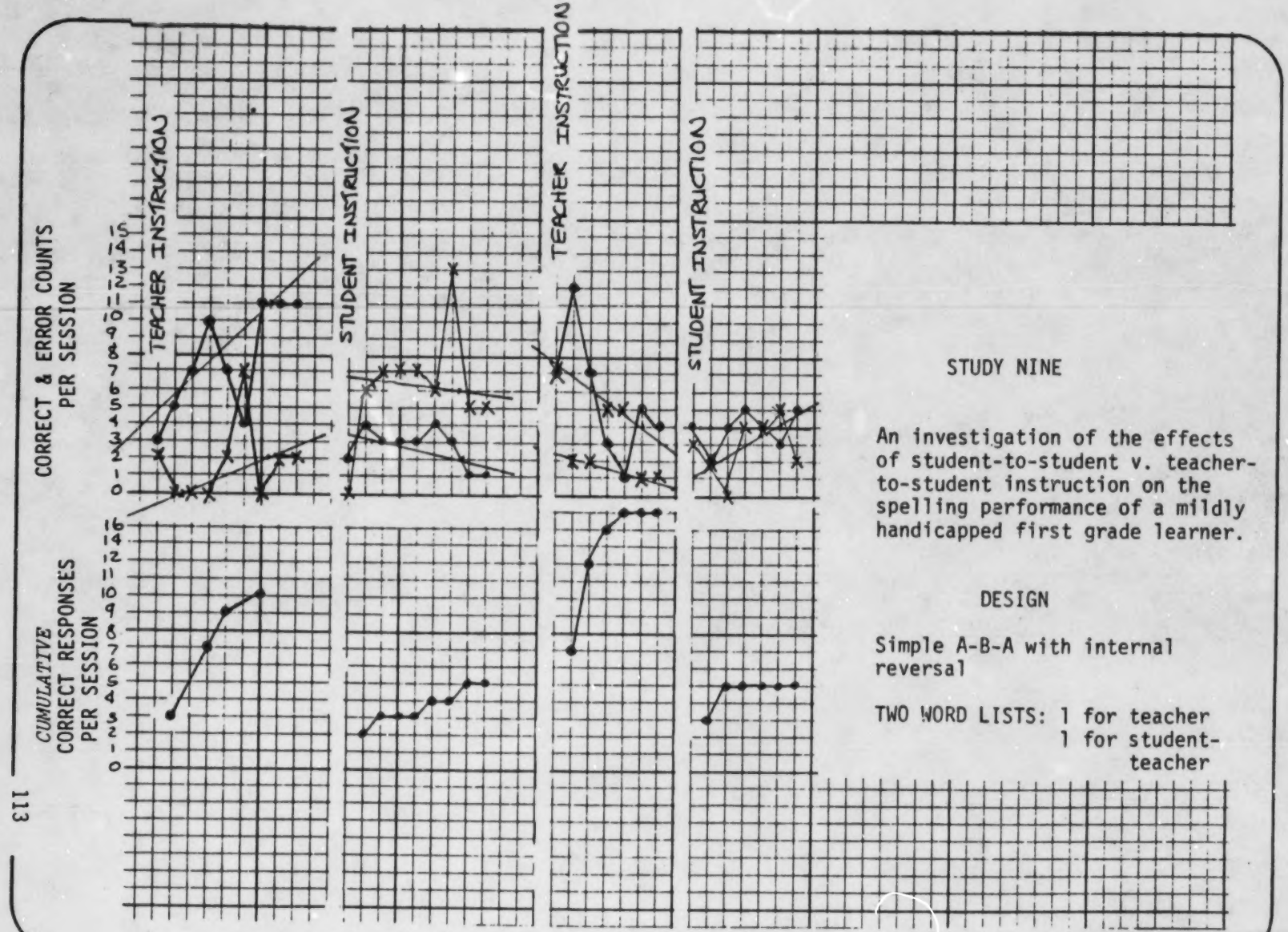
DELIVERING THE PROBE:

(To the data collector): Each day during baseline, ask Sherry to write or print the words which you say. During BASELINE, give Sherry five words per day to spell. Each day the words will be different (see attached). Use direct cues to the student such as:

"Write the words I say. The first word is _____. The second words is _____. Etc.

During intervention phases, Becky and Ms. Sims will instruct Sherry on a certain number of spelling words. TAKE DATA ONLY ON THE WORDS THEY HAVE STUDIED DURING THE PRACTICE SESSIONS.

In all the intervention phases, both student and teacher instructors whould be advised when a word has been spelled correctly on two consecutive days. When a word has reached this criteria, it should be removed from the list.


TEACHER INSTRUCTION
STUDENT INSTRUCTION
TEACHER INSTRUCTION
STUDENT INSTRUCTION
CORRECT & ERROR COUNTS PER SESSION
CUMULATIVE CORRECT RESPONSES PER SESSION
0 - 5 - 10 - 15 - 20 - 25 - 30 - 35
0 - 2 - 4 - 6 - 8 - 10 - 12 - 14 - 16
113

STUDY NINE

An investigation of the effects of student-to-student v. teacher-to-student instruction on the spelling performance of a mildly handicapped first grade learner.

DESIGN

Simple A-B-A with internal reversal

TWO WORD LISTS: 1 for teacher
1 for student-teacher

STUDY NINE

AN INVESTIGATION OF THE EFFECTS OF STUDENT-TO-STUDENT VERSUS TEACHER-TO-STUDENT INSTRUCTION ON THE SPELLING PERFORMANCE OF A MILDLY HANDICAPPED FIRST GRADE LEARNER.

INFORMATION SUMMARY

NOTE: A "baseline phase" was implemented in so far as to identify two pools of words which were composed of words the learner COULD NOT SPELL CORRECTLY. In as much as this has no relationship to performance following instruction, it is not reported.

PHASE	Correct Median	Correct Slope	Error Median	Error Slope	Cumulative Words at Criteria
TEACHER INSTRUCTION LIST A	7	x 2.63	1	x 2.0	10
STUDENT INSTRUCTION LIST B	3	÷ 2.33	6	÷ 1.17	5
TEACHER INSTRUCTION LIST A	5	÷ 2.50	2	÷ 3.33	16
STUDENT INSTRUCTION LIST B	4	x 1.00	3	x 5.00	5

CRITICAL QUESTIONS

Study nine

FOR CORRECT RESPONSES

1. *Was the pattern of performance consistently better under any particular condition (teacher or student instruction)?*

   YES ☐ *NO* ☑

2. *Was the cumulative number of words learned to criteria signficantly better under a particular condition (teacher or student)?*

   YES ☑ *NO* ☐

DURING TEACHER INSTRUCTION

FOR ERROR RESPONSES

1. *Was the pattern of performance consistently better under any particular condition (teacher or student instruction)?*

   YES ☐ *NO* ☑

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Ten*

STUDY TITLE: *An investigation of the effects of teacher versus student cues on the disruptive classroom behaviors of a severely emotionally disturbed first grade learner.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Vicky Sims

SPECIAL CLASS TEACHER: Linda Knowles

STUDENT LEARNER (pseudo name): Chris

STUDENT TEACHER (pseudo name): Perry

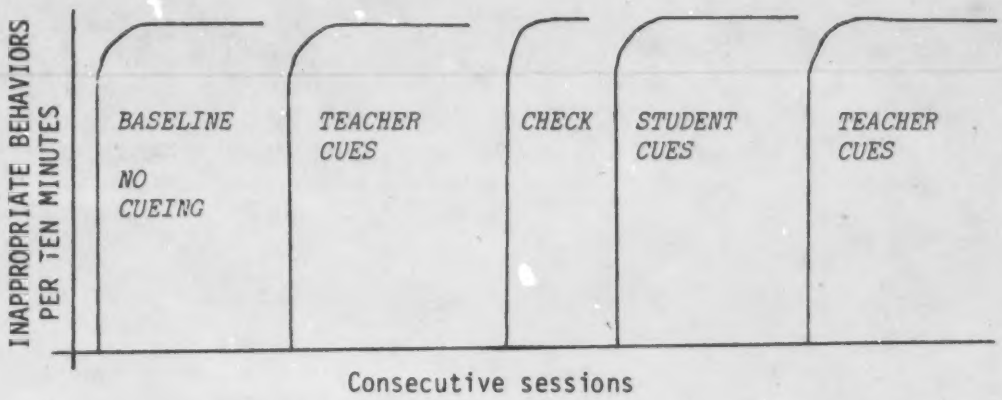
SCHOOL: Hayden Lake Elementary School, Hayden Lake, Idaho

STUDY ABSTRACT

A severely emotionally disturbed first grader was the subject of the 10th study in the research series. At the time the A-B-A designed study was introduced, the subject was demonstrating a high frequency of inappropriate classroom behaviors ranging from hitting to abusive language. Results of the study which examined the the effects of teacher v. student-delivered cues, show that while both interventions were successful in decreasing inappropriate behaviors, student-delivered cues produced the best results considering all analysis variable (range, median score and pattern of performance - slope).

STUDY TEN
DESIGN

Simple A-B-C-B



STUDY TEN

DATA COLLECTOR: Carline Clark

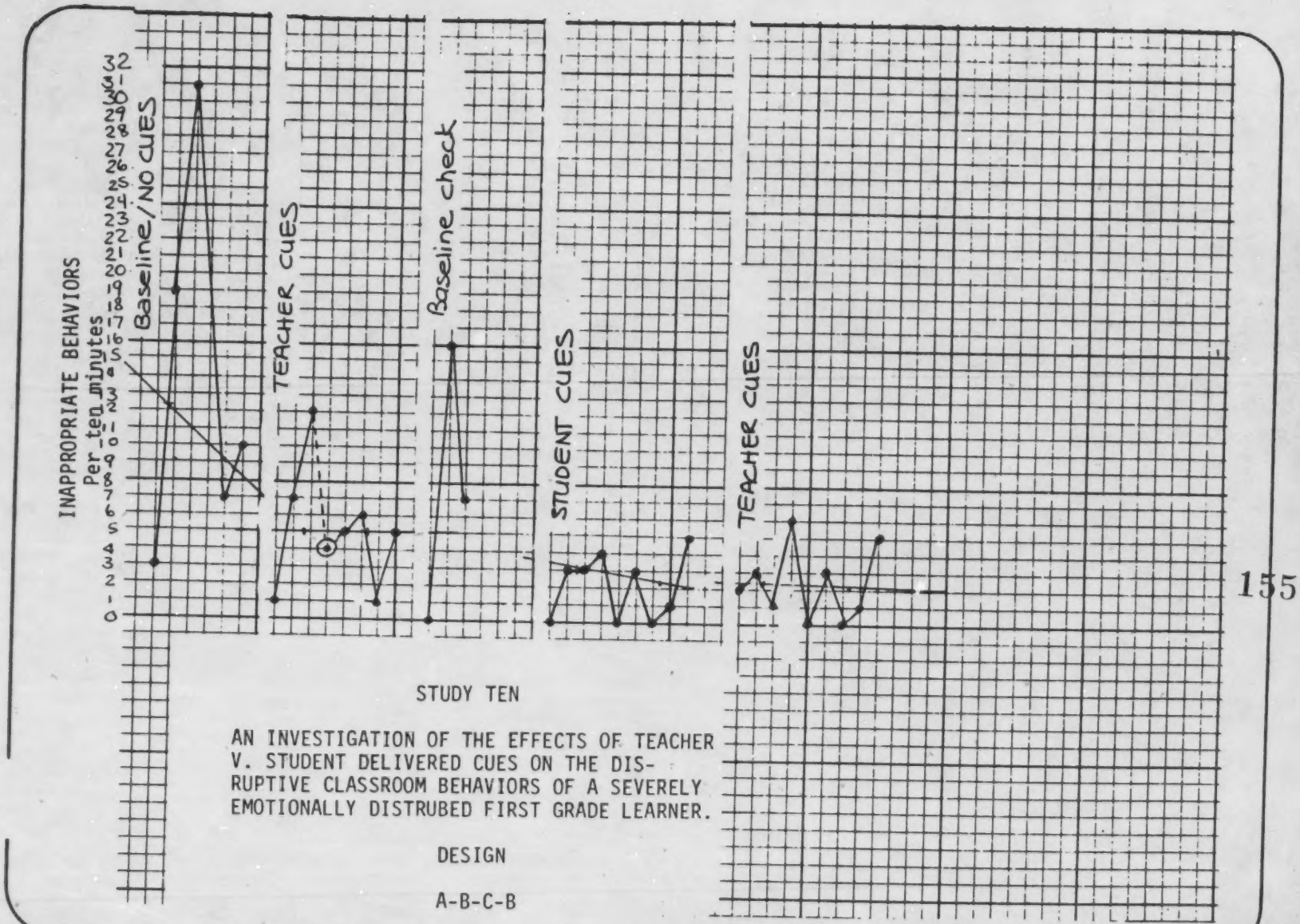
DATA COLLECTION TIME: 8:20 - 8:30 daily

SKILL: Behavior (decrease of inappropriate)

PINPOINTS:
- spitting
- hitting
- poking
- shoving desk or chair
- pushing
- opening and shutting closet doors
- yelling
- inappropriate talk-outs:
  "What am I suppose to be doing?"
  "Where's my paper?"
  "I hate it here"
  and
  "I want to go home!"
- stalking or walking aimlessly around the room
- moving furniture around the room
- poking or pointing a figure at other students to make accusations
- name calling
- throwing objects
- taking things from classmates without permission
- verbal arguments with other children

COUNTING GUIDELINES:

During the study stand in an "out-of-the-way" place in the classroom. DO NOT INTERACT AT ALL WITH OTHER CHILDREN OR WITH CHRIS. Each time you spot a "pinpoint" put a slash in the appropriate data box prepared for the study.


INAPPROPRIATE BEHAVIORS
Per ten minutes
0 - 1 2 3 4 5 6 7 8 9 10 - 11 12 13 14 15 16 17 18 19 20 - 21 22 23 24 25 26 27 28 29 30 - 31 32
Baseline/NO CUES
TEACHER CUES
Baseline check
STUDENT CUES
TEACHER CUES

STUDY TEN

AN INVESTIGATION OF THE EFFECTS OF TEACHER V. STUDENT DELIVERED CUES ON THE DISRUPTIVE CLASSROOM BEHAVIORS OF A SEVERELY EMOTIONALLY DISTRUBED FIRST GRADE LEARNER.

DESIGN

A-B-C-B

STUDY TEN

AN INVESTIGATION OF THE EFFECTS OF TEACHER VERSUS STUDENT DELIVERED CUES ON THE DISRUPTIVE CLASSROOM BEHAVIORS OF A SEVERELY EMOTIONALLY DISTURBED FIRST GRADE LEARNER.

INFORMATION SUMMARY

PHASE	*MEDIAN SCORE*	*SLOPE*	*As compared to baseline*	*As compared to alternate intervention*
BASELINE NO CUES DELIVERED	10	⋮ 1.62		
TEACHER DELIVERED CUES	5	x 1.00	same or slightly -	-
STUDENT DELIVERED CUES	3	⋮ 1.75	+	+
TEACHER DELIVERED CUES 2	3	⋮ 1.25	same or slightly -	

Study Ten

CRITICAL QUESTIONS

1. *What was the range of performance during the baseline condition and during the intervention conditions?*

   B: 3 - 31; Tchr: 1 - 12; B-check: 0 - 16; St: 0 - 5; Tchr: 0 - 7

2. *Was the pattern of performance consistently better during teacher-delivered cue phases than during the baseline condition?*

   YES ☐ *NO* ☑

3. *Was the pattern of performance better during the student-delivered cue phase than during the baseline condition?*

   YES ☑ *NO* ☐

4. *Considering pattern of performance, median score, and range, which condition produced the most positive effect on decelerating inappropriate behaviors?*

   Student-delivered cues

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Eleven*

STUDY TITLE: *An investigation of the effects of regular classroom teacher instruction v. student-to-student instruction on the acquistion of expressive language for a severely handicapped 2nd grade learner.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Joy Geuin

SPECIAL CLASS TEACHER: Linda Knowles

STUDENT LEARNER (pseudo name): Lorraine

STUDENT TEACHER (pseudo name): Tasi

SCHOOL: Hayden Lake Elementary School, Hayden Lake, Idaho

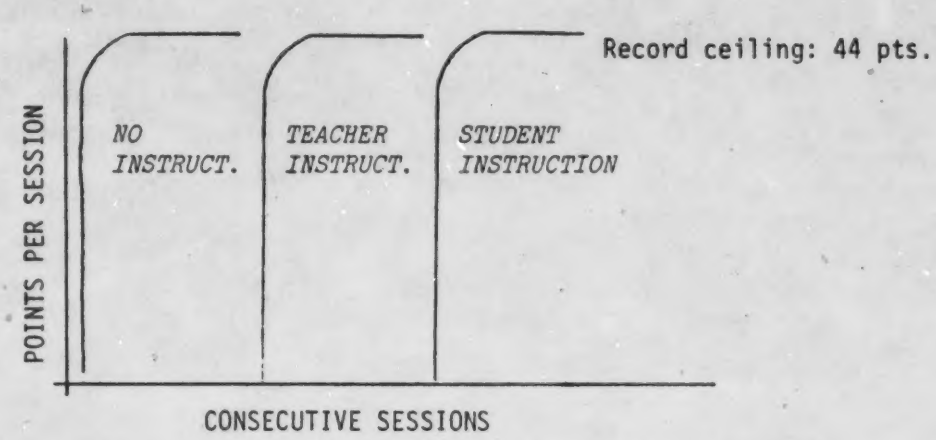
STUDY ABSTRACT

The subject of Study Eleven was a severely handicapped 2nd grader who experienced great difficulty in the area of expressive language. The results of the study which was designed to test the effects of teacher v. student delivered instruction on the acquisition of expressive language concepts and sentence structure show that the subject performance PATTERN was accelerated slightly by TEACHER INSTRUCTION. Performance was ADVERSELY effected by student instruction. Throughout the study the student's median scores continued to decline.

STUDY ELEVEN

DESIGN

Simple A-B-C [1]



1. *The study was originally designed to include three subsequent phases: baseline 2, student instruction 2 and teacher instruction 2. Unfortunately the subject moved from the school district before the study could be entirely completed as planned.*

STUDY ELEVEN

DATA COLLECTORS: Carline
Ethel

DATA COLLECTION TIMES: Daily 11:50 - 11:55
2:00 - 2:05

SKILL: Expressive language/ Simple and complex sentences

PINPOINT: Say correct concept (on, under, by or next to, in and between); say complete sentence.

COUNTING GUIDELINES:

Score each FRAME for correct concept (1 point for simple sentence, 2 points for compound sentence) and for correct sentence structure (1 point for full/ complete sentence for a simple sentence and 2 points for a full or complete compound sentence) SEE SCORING SHEET, attached.

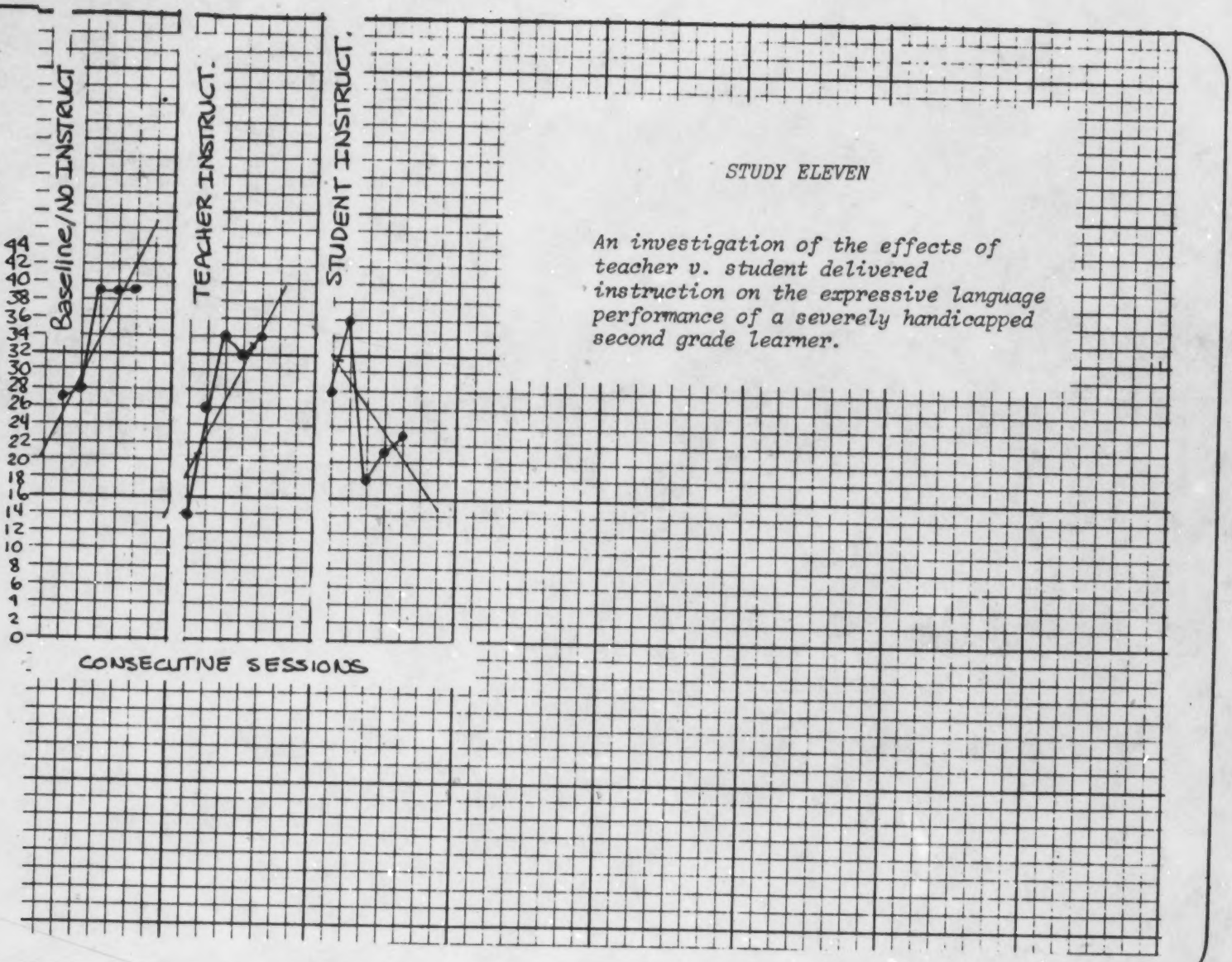
Score self-corrections as correct for concept and/or sentence structure.

Score skipped frame as a total error (see scoring sheet).

DELIVERY GUIDELINES:

Do not time this probe. Ask the student to try each frame. Cue the student to start by saying, "Tell me what this picture says."

Do not provide informational or corrective feedback during the baseline or other conditions.



STUDY ELEVEN

An investigation of the effects of teacher v. student delivered instruction on the expressive language performance of a severely handicapped second grade learner.

STUDY ELEVEN

AN INVESTIGATION OF THE EFFECTS OF TEACHER V. STUDENT DELIVERED INSTRUCTION ON THE EXPRESSIVE LANGUAGE PERFORMANCE OF A SEVERELY HANDICAPPED SECOND GRADE LEARNER.

DATA SUMMARY
and
CRITICAL QUESTIONS

PHASE	*CORRECT MEDIAN*	*CORRECT SLOPE*
NO INSTRUCTION	39	x 1.61
TEACHER INSTRUCTION	32	x 1.89
STUDENT INSTRUCTION	23	÷ 1.60

1. *Was the pattern of performance better during baseline, teacher instruct or student instruct conditions?*

   TEACHER INSTRUCTION

2. *Was the pattern of performance drastically altered by any particular intervention?*

   NEGATIVELY EFFECTED BY STUDENT INSTRUCTION

3. *Was there drastic range change in any one or all of the conditions?*

   Signficant range variations in ALL phases

STUDY SERIES II: *INVESTIGATIONS OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE ACADEMIC OR SOCIAL BEHAVIORS OF ELEMENTARY, HANDICAPPED STUDENTS*

STUDY NUMBER: *Twelve*

STUDY TITLE: *An investigation of student-to-student v. teacher-to-student instruction on the reading performance of a fifth grade, mildly handicapped learner.*

PRIMARY RESEARCHER: Corrine A. McGuigan

REGULAR CLASS TEACHER: Gwen Urbanac

SPECIAL CLASS TEACHER: Linda Knowles

STUDENT LEARNER (pseudo name): Bill

STUDENT TEACHER (pseudo name): Eric

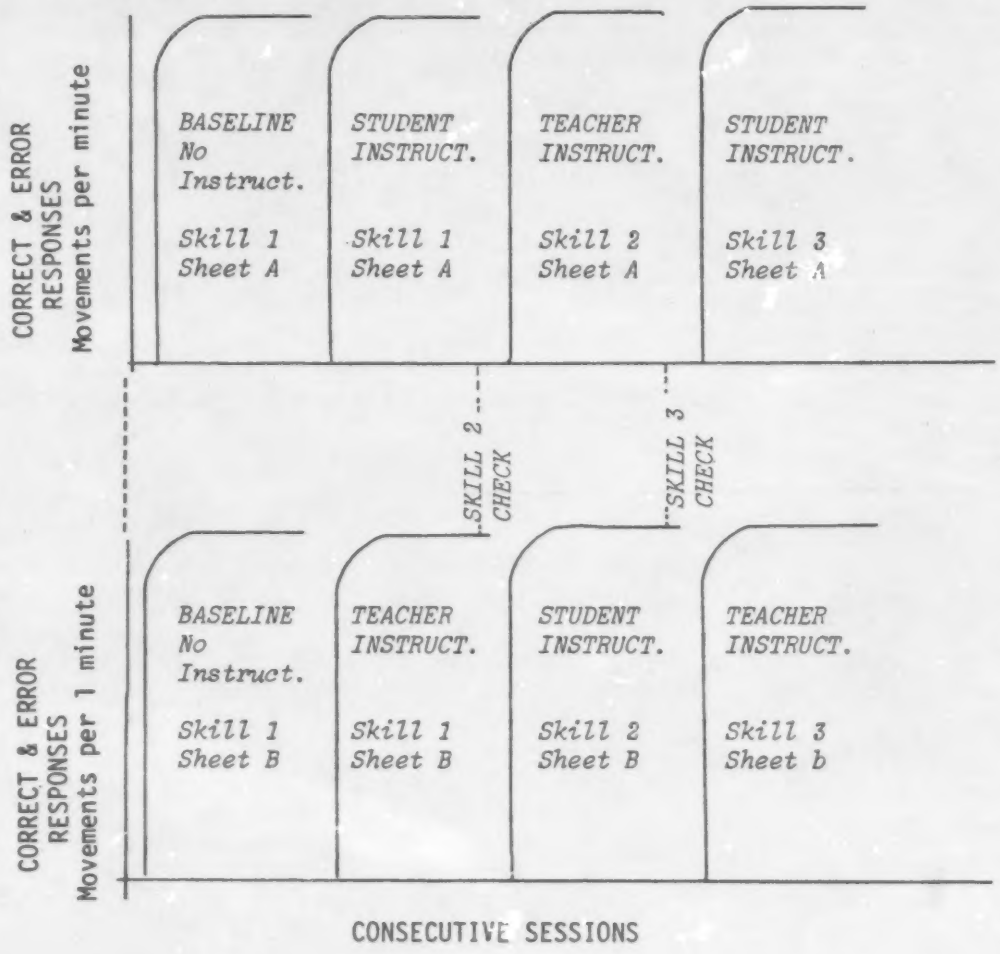
SCHOOL: Hayden Lake Elementary School, Hayden Lake, Idaho

STUDY ABSTRACT

A mildly handicapped fifth grader who was having reading difficulties was the subject of Study number Twelve. In what could be considered a rather classic study, the subject showed nearly matched improvements in the acceleration of correct responses and the deceleration of error responses when either student-to-student or teacher-to-student instruction was applied. The results were found to be consistent across three slightly varied but related skills.

STUDY TWELVE
DESIGN

A-B-A Multiple baseline reversal (internal and external)



128

STUDY TWELVE

DATA COLLECTOR: Carline

DATA COLLECTION TIMES: 10:05 - 10:15
12:05 - 12:15

SKILLS:

Reads words from Wilson's Essential Vocabulary A and B sheets (random assortment)

PINPOINT: Say words

COUNTING GUIDELINES:

COUNT AS CORRECT: words read correctly; self-corrections; hesitations followed by correct word.

COUNT AS ERROR: Omissions or words not known; hesitations of more than 5 seconds not followed by correct response; misread words.

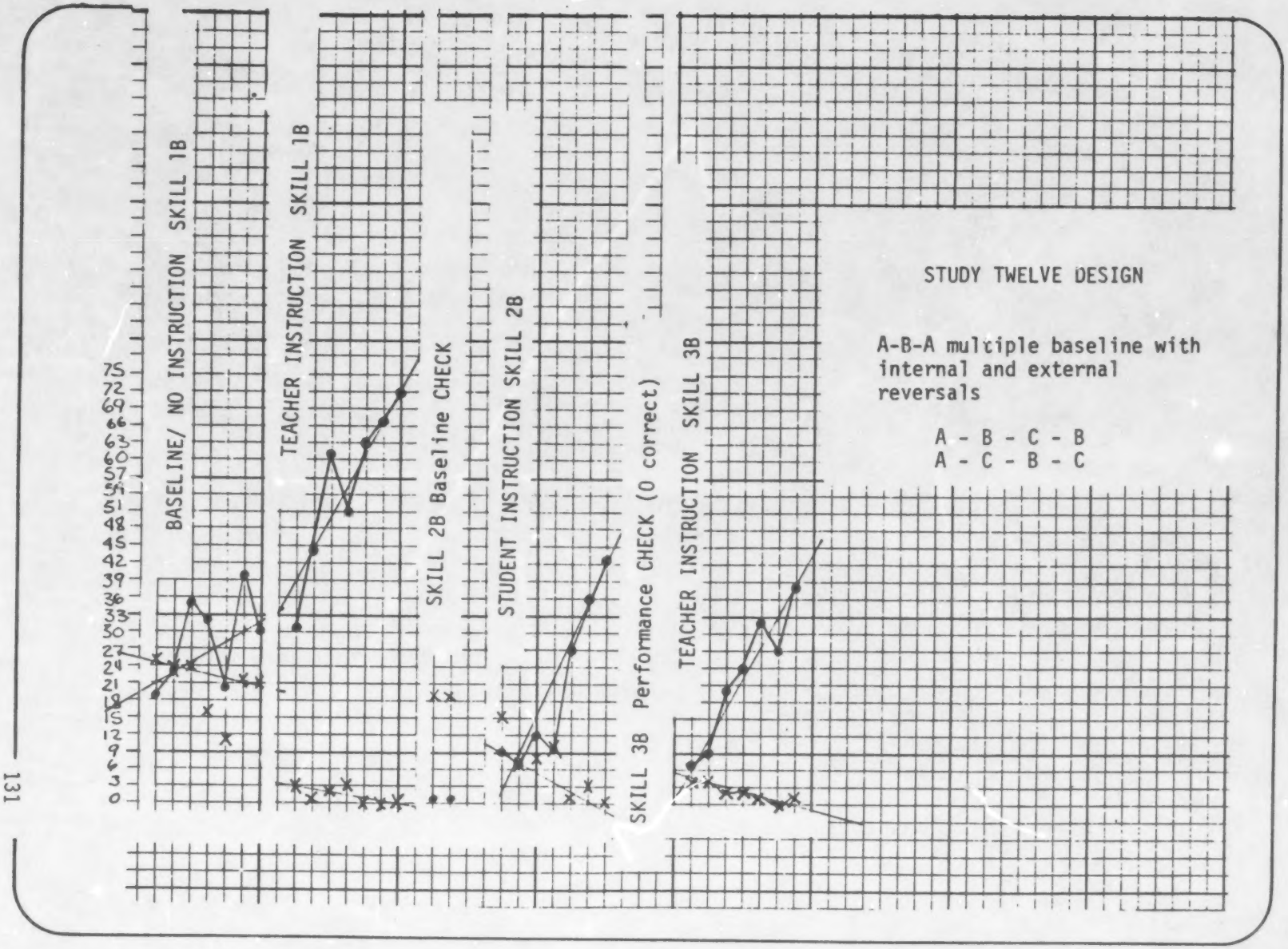
DELIVERING THE PROBE:

During the 10:05 session, use the "A-SHEET" probe; during the 12:05 session, use the "B-SHEET" probe

Each day during the baseline condition, give Bill the correct probe for the session. Tell him to read as many words as he can in the one minute you will give him. Tell him where to start (it can be different each day). Instruct him to read across the page and to tell you when he doesn't know a words. DO NOT LET HIM SKIP AROUND ON THE PAGE.

Do not provide any feedback during baseline or any of the subsequent phases.

CORRECT AND ERROR RESPONSES
MOVEMENTS PER MINUTE
130
BASELINE/ NO INSTRUCTION SKILL 1A
STUDENT INSTRUCTION SKILL 1A
SKILL 2A Baseline CHECK
TEACHER INSTRUCTION SKILL 2A
SKILL 3A Baseline CHECK / no data entered (0)
STUDENT INSTRUCTION SKILL 3A
STUDY TWELVE
An investigation of the effects of student-to-student v. teacher-to-student instruction on the reading performance of a mildly handicapped 5th grade learner.


BASELINE/ NO INSTRUCTION SKILL 1B
TEACHER INSTRUCTION SKILL 1B
SKILL 2B Baseline CHECK
STUDENT INSTRUCTION SKILL 2B
SKILL 3B Performance CHECK (0 correct)
TEACHER INSTRUCTION SKILL 3B
STUDY TWELVE DESIGN
A-B-A multiple baseline with internal and external reversals
A - B - C - B
A - C - B - C

STUDY TWELVE

AN INVESTIGATION OF THE EFFECTS OF TEACHER-TO-STUDENT V. STUDENT-TO-STUDENT INSTRUCTION ON THE READING PERFORMANCE OF A MILDLY HANDICAPPED FIFTH GRADE LEARNER.

INFORMATION SUMMARY

PHASE	*CORRECT MEDIAN*	*CORRECT SLOPE*	*ERROR MEDIAN*	*ERROR SLOPE*
BASELINE SERIES A	37	x 1.11	17	x 1.4
STUDENT INSTRUCT SERIES A	64	x 1.29	0	x 1.0
TEACHER INSTRUCT SERIES A	31	x 6.33	0	÷ 3.0
STUDENT INSTRUCT SERIES A	23	x 6.50	6	÷ 2.0
BASELINE SERIES B	30	x 1.60	22	÷ 1.09
TEACHER INSTRUCT SERIES B	61	x 1.84	1	÷ 3.00
STUDENT INSTRUCT SERIES B	12	x 7.00	7	÷ 9.00
TEACHER INSTRUCT SERIES B	24	x 6.5	2	÷ 4.00

STUDY TWELVE

CRITICAL QUESTIONS

FOR CORRECT RESPONSES

1. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the baseline conditions?*

   YES ☒ *NO* ☐

2. *Was the pattern of performance during TEACHER INSTRUCTION consistently better than that of the baseline condition?*

   YES ☒ *NO* ☐

3. *What were the patterns of performance during STUDENT INSTRUCTION?*

   x 1.29, x 6.50, x 7.00

4. *What were the patterns of performance duirng TEACHER INSTRUCTION?*

   x 6.33, x 1.84, x 6.50

FOR ERROR RESPONSES

CONSIDERING THE POSITION OF THE ERRORS (median and mean scores)

1. *Was the pattern of performance during STUDENT INSTRUCTION consistently better than that of the baseline condition?*

   YES ☒ *NO* ☐

2. *Was the pattern of performance during TEACHER INSTRUCTION consistently better than that of the baseline condition?*

   YES ☒ *NO* ☐

3. *What were the calculated patterns of performance during STUDENT INSTRUCTION phases?*

   x 1.0 (at zero), ⋮ 2.00, ⋮ 9.00

4. *What were the calculated slopes during TEACHER INSTRUCTION phases?*

   ⋮ 3.0, ⋮ 3.0, ⋮ 4.00

RESULTS, IMPLICATIONS and SUMMARY

STUDY SERIES II

There were two purposes of this research project. The *first general purpose* was to examine teacher-to-student instruction versus student-to-student instruction on correct and error responses. A *second general purpose* was to determine whether skills learned in one setting would generalize to a second setting.

Twelve studies were conducted using a single subject design for applied settings to determine the effectivement of peer teaching with handicapped children in the regular and special class settings. The results indicate no consistent or definitive differences between teacher-to-student instruction and student-to-student instruction on either correct or error responses.

In studies two and ten, student instruction produced better results than teacher instruction on correct responses. However, teacher instruction produced more positive change in studies one, three, nine and eleven. No instruction was more effective for producing positive change in student performance during studies five, seven, and eight. Student instruction and teacher instruction were nearly equal in studies six and twelve. The fact that student instruction was as good as teacher instruction in several studies is quite significant. The implications of these results are that student instructors can take some of the responsibility for providing a one-to-one program for handicapped children with no detrimental effect to the learner.

Both teacher instruction and student instruction were successful in reducing error responses in several of the twelve studies. However, teacher instruction more consistently produced fewer errors than student instruction. The rate of error response was, occasionally, lower during the baseline phase where there was no instruction.

It would be important, in future research, to examine the variables which may have resulted in the inconsistent findings. Since individuals may react differently in similar situations, the same instruction may have different effects on individual children. Possible variables may include the stage of learning of the student, the skills being taught, the ability of the student instructor, or the quality of instruction.

A second purpose of this research was to examine the generalization of skills. Studies one, two, three and four examined generalization and found that it did occur. Skill generalization was successfully programmed to another setting in all four of the studies. The importance of this finding is that, if generalization can be programmed, then the teacher will not have to teach the appropriate response in multiple settings and the student will not have to waste time "relearning" appropriate responses.

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APPENDIX A

RESEARCHER INTRODUCTION LETTER

PARENT PERMISSION LETTER

PARENT PERMISSION FORM

University of Idaho
College of Education
Special Education
Moscow, Idaho 83843

February 21, 1978

Coeur d'Alene School District
Coeur d'Alene, Idaho 83814

To Whom It May Concern:

I am a graduate student at the University of Idaho, currently working on a doctoral degree in education. As part of my study plan, and as part of a recently awarded grant from the Bureau of Education for the Handicapped, I am attempting to identify procedures which will help regular classroom teachers conduct meaningful and effective instruction. Primarily, I am interested in procedures which would help teachers implement successful one-to-one, individualized instructional programs, so badly desired in the regular classroom.

One procedure I believe might be effective is the use of one child as an instructor for another child. Most commonly, this has been known as "peer-tutoring." While previous research indicates that peer-tutoring can be an effective procedure for delivering drill on a one-to-one basis, little work has actually been completed which either describes how peer-tutors (or in my case, "Student Instructional Assistants") should be trained or the actual degree of their impact.

Teachers and administrators at Ramsey Elementary School and Hayden Lake Elementary School are also interested in finding more effective procedures for the delivery of individualized instruction in the regular classroom and have offered to help me conduct the needed research. At this time, I am asking that you too might support such studies and give your approval that they might be conducted.

Briefly, the study would involve approximately five teachers from each elementary school and approximately ten students from each school. Of the ten children at each school, five would be selected to be trained as "Student Instructional Assistants" and five would be targeted as children who might

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benefit from additional one-on-one instruction for ten to thirty minutes per day. The attached letters to parents of "Student Instructional Assistants" and "Student Learners" can provide you with more specific information regarding the responsibilities and activities of each. However, no action will be taken to initiate the study until your approval is given.

Your consideration of the matter is greatly appreciated. If you have any questions, or if I may clarify any matters, please do not hesitate to call. I may be reached at (208) 885-6150 (office) or 882-6849 (home).

Most sincerely,

Corrine A. McGuigan
Graduate Instructional Assistant
Department of Special Education

CAMc/lb

attachments

University of Idaho
College of Education
Special Education
Moscow, Idaho 83843

February 21, 1978

Dear Parent or Guardian:

I am a graduate student at the University of Idaho, currently working on a doctoral degree in education. As part of my study plan, I am attempting to identify procedures which will help teachers and learners to conduct efficient and meaningful instruction. A procedure I believe might be effective is the use of one child as an instructor for another child. Most commonly this has been known as "peer-tutoring."

While previous research indicates that peer-tutoring can be an effective procedure for delivering drill or instruction on a "one-to-one" basis ("individualized instruction"), little work has actually been completed which describes how peer-tutors should be trained or the actual degree of their impact.

Your son's or daughter's teacher has agreed to help me study the issue of "Student Instructional Assistants" and their impact on learning. They have also suggested that your child might be helpful in conducting this study. Together, we would like you to consider this possibility and let us know what you think.

The following outlines what might be expected of your child as a "Student Learner" in the study:

I. Activities and Responsibilities. Student Learners shall participate in one-to-one instructional programs for approximately five to fifteen minutes, twice daily. They shall receive individualized instruction on skills selected by their classroom teacher or teachers. Instruction shall be delivered by the classroom teacher to the Learner for approximately five to ten days, and by a Student Instructional Assistant (another student who has already mastered the skill) for another five to ten days. All instruction shall take place in the regular classroom.

II. Selection. Student Learners shall be selected by the classroom teacher or teachers and the parents. They shall be students who are felt might benefit from a minimal amount of well guided, one-to-one instruction on one specific skill.

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We would also like you to know that at any time a Student Learner's performance is failing, it will be your option or the option of your child's teacher to discontinue the project.

If you feel your son or daughter might benefit from participating in the study, we would appreciate your written approval on the attached form. If you have additional questions or concerns, please feel free to call either of us prior to responding. If you would like your child to participate in the study, and would also like to know more about the project, you are most cordially invited to a discussion and overview of the project on Friday evening, March 3rd (time and place to be announced later).

Your time in considering this issue is greatly appreciated. On behalf of your child's teacher and myself, thank you very much.

Most sincerely,

Corrine A. McGuigan
Graduate Instructional Assistant
Department of Special Education

(208) 885-6150
(208) 882-6849

CAMc/lb

attachment

University of Idaho
College of Education
Special Education
Moscow, Idaho 83843

February 21, 1978

Dear Parent or Guardian:

I am a graduate student at the University of Idaho, currently working on a doctoral degree in education. As part of my study plan, I am attempting to identify procedures which will help teachers and learners to conduct efficient and meaningful instruction. A procedure I believe might be effective is the use of one child as an instructor for another child. Most commonly this has been known as "peer-tutoring."

While previous research indicates that peer-tutoring can be an effective procedure for delivering drill or instruction on a "one-to-one" basis ("individualized instruction"), little work has actually been completed which describes how peer-tutors should be trained or the actual degree of their impact.

Your son's or daughter's teacher has agreed to help me study the issue of "Student Instructional Assistants" and their impact on learning. They have also suggested that your child might be helpful in conducting this study. Together, we would like you to consider this possibility and let us know what you think.

The following outlines what might be expected of your child as a Student Instructional Assistant:

I. Responsibilities and Activities. Student Instructional Assistants will be responsible for:

   A. Participating in a two and one-half hour training program (one-half hour per day for five days). During these training sessions, your son or daughter will be taught how to present selected material; how to help another student drill and/or practice, and how to give feedback and praise to another learner.

   B. Acting as a Student Instructional Assistant during two, five to fifteen minute sessions per day for ten to fifteen days.

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II. Selection of Student Instructional Assistants. Student Instructional Assistants are children:

A. Who have demonstrated mastery in the skill being taught.

B. Who have ten to thirty minutes per day which could be "freed" for them to act as student instructors.

C. Whose teacher believes are capable of completing the student instructional assistant's training program.

D. Whose parents or guardians feel he/she would benefit from the experience.

We would also like you to know that at any time an instructional assistant's own academic or social performance is noticed to decline as a result of the study, he or she may discontinue the project upon request by the teacher and/or parent.

If you feel your son or daughter might benefit from participating in the study, we would appreciate your written approval on the attached form. If you have additional questions or concerns, please feel free to call either of us prior to responding. If you would like your child to participate in the study, and would also like to know more about the project, you are most cordially invited to a discussion and overview of the project on Friday evening, March 3rd (time and place to be announced later).

Your time in considering this issue is greatly appreciated. On behalf of your child's teacher and myself, thank you very much.

Most sincerely,

Corrine A. McGuigan
Graduate Instructional Assistant
Department of Special Education

(208) 885-6150
(208) 882-6849

CAMc/lb

attachment

_____
date

I give my permission for my son/daughter,

_____,

to participate in a study investigating the effects of "Student Instructional Assistants" on learning. I understand that my child will participate as:

_____ A Student Instructor

_____ A Student Learner

I also realize that my child's teacher or I may ask that my child discontinue his or her participation in this study when it hinders his or her established academic or social progress.

_____
signature of parent/guardian

PEER-TEACHING PROJECT

Rita Sherbenou, Researcher

I consent to having _____ participate in the research project to be conducted by Rita Sherbenou. I understand that the project is being conducted to determine the effectiveness of a peer-teacher utilizing components from the individualized instructional program in teaching mainstreamed, handicapped children. The only testing which will be done are daily probes (short quizzes) which will be taken at the end of each teaching session. I understand that my child's name will be kept confidential and any recording or video taping of my child will be used only by members involved in the project and will not be released for publication. I understand that I am free to ask questions of my child's teacher or the project director at any time.

Participation in this project will not be detrimental to my child's educational progress or emotional development. I am free to examine all information collected during the study and I may withdraw my child from the project at any time without penalty.

_____
Parent Signature

_____
Parent Signature

_____
Project Director

SUE CALVERT/ DATA SCHEDULE WEST PARK ELEMENTARY

12:15 - 12:30	Special Classroom Setting Probe on letter names Five handicapped children
12:30 - 1:30	Regular Classroom Setting Monitor teaching situation probe on letter names after teaching session for each of five handicapped children

Begin February 20, 1978

APPENDIX B

INITIAL TRAINING SEMINAR

- AGENDA
- TERMINOLOGY WORKSHEET
- TEACHER STUDY DESIGN WORKSHEET
- STUDY FACT SHEET

Special Training Seminar For

THE INVESTIGATION OF THE EFFECTS OF STUDENT INSTRUCTIONAL ASSISTANTS ON THE IMPLIMENTATION OF INDIVIDUAL INSTRUCTIONAL PLANS

AGENDA

March 3, 1978
NORTHSHORE HOTEL
6:00 - 8:00 P.M.

AN INTRODUCTION
" 20 Kids, 10 Teachers, 4 Data Collectors, 2 Researchers and 'The Committee': How will we all survive?"

THE MOSCOW STUDIES
"A Classic work"

RESEARCH TERMINOLOGY
Or "Why you should never mix-up the terms "wine" and "line"

BASIC RESEARCH DESIGNS
"You asked for it you got it, Toyota!"

AND LAST, BUT NOT LEAST, RELIABILITY.

March 4, 1978
RAMSEY ELEMENTARY SCHOOL
9:00 - 4:00 P.M.

9:00 - 12:00 Ramsey Teachers and Data Collectors
*Pinpoints and pinpoint perameters
*Probes and Probing
*Practice: Pinpoints, Probes and Counting
BREAK
*Basic sequences
*Reliability data
*Data Storage systems
*Basic questions followed by the most unusual answers

1:00 - 4:00 Hayden Lake Teachers and Data Collectors
As above

TERMINOLOGY TERMINOLOGY TERMINOLOGY TERMINOLOGY

RESEARCH PROJECT: refers to the combination of studies (10) investigating the effects of student instructional assistants on the implementation of IIPs of mildly to severely handicapped children.

RESEARCH STUDIES: refers to selected studies or study; each study includes a student learner, SIA, Regular Classroom Teacher, a Special Educator, a Data Manager and a study supervisor.

RITA SHERBENOU: a rare species of graduate student found in the lower levels of the earth's formation (that means, like the rest of special ed., she's in the basement!)

PHASE: A condition or a period of time during which a certain "condition" is operable (thank you Dick Nixon). A period of time during which specified conditions or "variables" are strictly observed; i.e. Phase 1 = baseline (or no intervention or change) conditions.

CONTROLLED VARIABLES: Any conditions which may or may not effect instruction, etc., of which we are aware; i.e., length of time of instruction, time of day of instruction, presentation of materials, etc.

UNCONTROLLED VARIABLES: Any conditions which may or may not effect instruction and of which we may or may not be aware but CANNOT CONTROL, even if we are aware; i.e., what the student ate for breakfast, the position of the moon, the number of minutes spent at home with 1:1 instruction with an older brother.

INTERVENTION: A change we make in a student's program in an effort to determine the effects of a new strategy.

BASELINE: A phase, or period of time, during which NO INTERVENTION is initiated; just keep things how they already were.

STATE OF CONFUSION: Usually the result of reading terminology sheets.

PHASE CHANGE LINE: A charting convention or procedure; when entered on a chart, phase change lines tell the reader at what time in the study a change (or intervention) was made. The TYPE OF CHANGE is usually written UNDER the Phase Change Line.

PINPOINT: A very specific behavior which is to be counted; it is discreet - that is, it has definite starting and stopping points.

FEEDBACK: Giving back information or praise or both. When you tell a student how many correct or error responses they made, you are giving them "feedback."

STUDY DESIGN STUDY DESIGN STUDY DESIGN STUDY DESIGN STUDY DESIGN STUDY DESIGN STUDY DESIGN

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NAME OF STUDY:

NAME OF STUDENT LEARNER:

NAME OF STUDENT INSTRUCTIONAL ASSISTANT:

NAME OF CLASSROOM TEACHER:

NAME OF DATA MANAGER:

STUDY FACT SHEET

STUDENT

TEACHER

STUDENT INSTRUCTIONAL ASSISTANT

SKILL:

TIME SKILL IS TAUGHT:

STUDY DESIGN:

COUNT AS CORRECT:

COUNT AS ERROR:

INITIAL TRAINING SEMINAR

- DATA COLLECTOR SCHEDULES
- DATA COLLECTION WORKSHEETS

DATA COLLECTION SCHEDULE: KIM

8:45 - 8:55	WITH RODNEY READ WORDS WITH PREFIXES & SUFFIXES	M. LCHNOW
9:00 - 9:15	WITH VICKEY READ WORDS WITH SHORT VOWELS AND R & L BLENDS	P. PERRY
9:40 - 9:50	WITH JEANNA SAY LETTER NAMES	B. CHEELEY
10:20 - 10:30	WITH JEANNA SAY CONSONANT SOUNDS	B. CHEELEY
10:50 - 11:00	WITH MIKE PUNCTUATION/CAPIT.	L. CUNNINGHAM
1:50 - 2:00	WITH MIKE SPELLING	L. CUNNINGHAM

CARELINE CLARK/ DATA SCHEDULE HAYDEN LAKE ELEMENTARY SCHOOL

8:20 - 8:25	COUNT DISRUPTIVE CLASSROOM BEHAVIORS FOR THE ENTIRE 5' PERIOD; KEEP DATA BY TALLYING DISRUPTIVE BEHAVIORS.	MS. SIMS
8:25 - 8:30	SAME AS ABOVE/ STUDENT: CHRIS F.	
9:15 - 9:25	COUNT DIGITS AND COMPUTATION MARKS TO DIVISION PROBLEMS/ 3' PROBE/ STUDENT: BILL	MS. PITTSLEY
9:20 - 9:30	COUNT DIGITS TO MULTIPLICATIO & DIVISION PROBLEMS/ 1' PROBE STUDENT: CHRIS M.	MS. PITTSLEY
10:00 -10:10	COUNT SAYS WORDS/ "A-SHEET" PROBE 1' PROBE/ STUDENT: CHRIS M.	MS. URBANAC
10:05 -10:15	COUNTSAYS WORDS/ "A-SHEET" PROBE 1' PROBE/ STUDENT: BILL M.	MS. URBANAC
11:50 -11:55	COUNT CORRECT CONCEPT/SENTENCE STRUCTURE/ 17 frames STUDENT: LORRAINE L.	MS. GEUIN
12:00 -12:10	COUNT SAYS WORDS/ "B-SHEET" PROBE 1' PROBE/ STUDENT: CHRIS M.	MS. URBANAC
12:05 -12:15	COUNT SAYS WORDS/ "B-SHEET" PROBE 1' PROBE/ STUDENT: BILL M.	MS. URBANAC

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DATA COLLECTION SCHEDULE: MARY

9:05 - 9:15	WITH RODNEY READ WORDS WITH PREFIXES AND SUFFIXES	M. Lunhow
9:40 - 9:50	WITH JEFF SAY CONSONANT SOUNDS	B. CHEELEY
10:20 - 10:30	WITH JEFF SAY VOWEL SOUNDS A, I & O	B. CHEELEY
10:40 - 10:55	WITH VICKEY READS WORDS WITH SHORT VOWELS	P. PERRY

ETHEL CRAWFORD/DATA SCHEDULE HAYDEN LAKE ELEMENTARY SCHOOL

1:25 - 1:35	COUNT SPELLING WORDS, correct or error. COUNT ONLY WORDS NOT SPELLED CORRECTLY 2 DAYS IN A ROW. NOT A TIMED PROBE. / SHERRY	MS. SIMS
1:35 - 1:45	COUNTDIGITS TO MULTIPLICATION & DIVISION PROBLEMS/ 1' PROBE STUDENT: CHRIS M.	MS. PITTSLEY
1:35 - 1:45	COUNT DIGITS TO DIVISION PROBLEMS/ 3' PROBE/ STUDENT: BILL M.	MS. PITTSLEY
2:00 - 2:05	COUNT CORRECT CONCEPT & SENTENCE STRUCTURE/ NOT TIMED, 17 FRAMES STUDENT: LORRAINE L.	MS. KNOWLES
2:15 - 2:25	COUNT SPELLING WORDS, correct or error. COUNT ONLY WORDS NCT SPELLED CORRECTLY 2 DAYS IN A ROW. NOT A TIMED PROBE. STUDENT: SHERRY *	MS. SIMS

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STUDENT:

DATA TIME(S) & LOCATION(S):

DATA COLLECTORS: MARK OFF SESSIONS COMPLETED. INFORM NEW INSTRUCTOR ONE DAY PRIOR TO WHEN SHE OR HE SHOULD BEGIN TEACHING. THANKS.

BASELINE
1
2
3
4
5
6
7
8
9

FIRST INTERVENTION
INSTRUCTOR:
1
2
3
4
5
6
7
8
9

$BASELINE_2$ (IF APPROPRIATE)
1
2
3
4
5

SECOND INTERVENTION
INSTRUCTOR:
1
2
3
4
5
6
7
8
9

$BASELINE_3$ (IF APPROPRIATE)
1
2
3
4
5

THIRD INTERVENTION
INSTRUCTOR:
1
2
3
4
5
6
7
8
9

$BASELINE_4$ (IF APPRCPRIATE)
1
2
3
4
5

FOURTH INTERVENTION
INSTRUCTOR:
1
2
3
4
5
6
7
8
9

OTHER COMMENTS:

STUDENT LEARNER: _____ DATA MANAGER _____

DATE STARTING OF PHASE ONE: _____

NUMBER OF DATA POINTS PER PHASE

Phase 1: _____ Phase 2: _____ Phase 3: _____ Phase 4: _____ Phase 5: _____

PHASE: _____ SESSION ONE: # Correct _____ # Errors _____ Comments:
DATE: _____ SESSION TWO: # Correct _____ # Errors _____

PHASE: _____ SESSION ONE: # Correct _____ # Errors _____ Comments:
DATE: _____ SESSION TWO: # Correct _____ # Errors _____

PHASE: _____ SESSION ONE: # Correct _____ # Errors _____ Comments:
DATE: _____ SESSION TWO: # Correct _____ # Erorrs _____

PHASE: _____ SESSION ONE: # Correct _____ # Errors _____ Comments:
DATE: _____ SESSION TWO: # Correct _____ # Errors _____

PHASE: _____ SESSION ONE: # Correct _____ # Errors _____ Comments:
DATE: _____ SESSION TWO: # Correct _____ # Errors _____

PHASE: _____ SESSION ONE: # Correct _____ # Errors _____ Comments:
DATE: _____ SESSION TWO: # Correct _____ # Errors _____

PHASE: _____ SESSION ONE: # Correct _____ # Errors _____ Comments:
DATE: _____ SESSION TWO: # Correct _____ # Errors _____ Comments:

DATA COLLECTION SHEET DATA COLLECTION SH

APPENDIX C

DISSEMINATION SITES

IDAHO SCHOOL DISTRICTS AND SUPERINTENDENTS 1978-79

COUNTY & DISTRICT	SCHOOL	SUPERINTENDENT	ADDRESS	ZIP	PHONE
ADA					
1 Ind.	Boise City	Barney Parker	1207 Fort St , Boise	83702	336-1370
2 Jt.	Meridian	August M. Hein	911 Meridian St., Meridian	83642	888-4458
3 Jt.	Kuna	Albert H. Vaughn	Box 158, Kuna	83634	922-5237
ADAMS					
11	Meadows Valley	Will Spalding	P.O. Drawer F, New Meadows	83654	347-2411
13	Council	Mort Curtis	Box 468, Council	83612	253-4297
BANNOCK					
21 Jt.	Marsh Valley	Gordon S. Loosle	P.O. Box 188, Arimo	83214	254-3306
25	Pocatello	Rulon M. Ellis	P.O. Box 1390, Pocatello	83201	232-3553
BEAR LAKE					
33	Bear Lake Co.	Donald F. Reno	P.O. Box 280, Montpelier	83254	847-1502
BENEWAH					
41 Jt.	St. Maries	Jim D. Harris	1315 Jefferson, St. Maries	83861	245-2579
42	Western Benewah	Robert van Griethuysen	Box 130, Plummer	83851	686-1419
BINGHAM					
52	Snake River	Darrell K. Loosle	Rt.2,Box 249 A, Blackfoot	83221	684-3001
55	Blackfoot	Spence Gardner	440 W. Judicial, Blackfoot	83221	785-2424
58	Aberdeen	Robert Bliss	P.O. Box 610, Aberdeen	83210	397-4114
59	Firth	Darrell J. Hatfield	P.O. Box 68, Firth	83236	346-6611
60 Jt.	Shelley	Donald J. Hobbs	200 E. Fir, Shelley	83274	357-3709
BLAINE					
61	Blaine Co.	Norman D. Riggs	P.O. Box 1008, Hailey	83333	788-2236
BOISE					
71	Garden Valley	Gary Barton	Garden Valley	83622	462-3246
BONNER					
82	Bonner Co.	E. Wayne Likens	P.O. Box 1399, Sandpoint	83864	263-2184
BONNEVILLE					
91	Idaho Falls	James F. Parsley, Jr.	690 John Adams Pkwy., I.F.	83401	522-7490
93 Jt.	E. Bonneville	Dee Armstrong	Rt.1, Box 460, Idaho Falls	83401	522-8172
BOUNDARY					
101	Boundary Co.	Nick Hallett	Box 899, Bonners Ferry	83805	267-3146
BUTTE					
111 Jt.	Arco	W. Denton Nebeker	P.O. Box 89, Arco	83213	527-8235
CAMAS					
121	Camas Co.	Harold Stroud	P.O. Box 117, Fairfield	83327	764-2472
CANYON					
131	Nampa	Rex E. Engelking	619 South Canyon, Nampa	83651	467-5291
132	Caldwell	Darrell Deide	1101 Cleveland, Caldwell	83605	459-0711
133	Wilder	Will G. Brown	Box 488, Wilder	83676	482-6229
134	Middleton	Darwin Andersen	P.O. Box 368, Middleton	83644	585-2723
135	Notus	Robert B. Morford	Box 256, Notus	83656	459-4633
136 Jt.	Melba	Norman D. Winters	Box 185, Melba	83641	495-2512
137	Parma	T. R. Moore	Box 246, Parma	83660	722-5115
139	Canyon	Ernie Knee	Rt. 8, Box 207, Caldwell	83605	459-1621
CARIBOU					
149 Jt.	Grace	Gene Millward	Box 328, Grace	83241	425-3954
149	North Gem	Elzo White	P.O. Box 70, Bancroft	83217	648-7848
150 Jt.	Soda Springs	Ellis L. Williams	Box 947, Soda Springs	83276	547-3371
CASSIA					
151 Jt.	Cassia Co.	Bill Peckham	P.O. Box 638, Burley	83318	678-9451
CLARK					
161	Clark Co.	Raymond Hoffman	P.O. Box 237, Dubois	83423	374-5215
CLEARWATER					
171 Jt.	Orofino	Lester C. Diehl	P.O. Box 789, Orofino	83544	476-5593
172	Elk River	Jack B. Deits	Elk River	83827	826-3406
CUSTER					
181 Jt.	Challis	Terrell L. Donicht	Box 304, Challis	83226	879-2255
182 Jt.	Mackay	J. N. Andreason	Box 208, Mackay	83251	588-2621
ELMORE					
192 Jt.	Glenns Ferry	James C. Reed	Drawer E, Glenns Ferry	83623	366-7436
193	Mountain Home	Derward Pederson	P.O. Box 890, Mtn. Home	83647	587-4483
FRANKLIN					
201 Jt.	Preston	Orson L. Bowler	120 E. 2nd South, Preston	83263	852-0283
202 Jt.	West Side	Harris G. Allen	Weston	83286	747-3411
FREMONT					
215 Jt.	Fremont Co.	M. Duane Handy	147 N. 2nd W., St. Anthony	83445	624-7542
GEM					
221 Jt.	Emmett	James E. Kantola	601 E. Third St., Emmett	83617	365-2961
GOODING					
231 Jt.	Gooding	Eugene J. Gibbons	Box 87, Gooding	83330	934-4221
232	Wendell	Lawrence LaRue	P.O. Box 307, Wendell	83355	536-2418
233 Jt.	Hagerman	Kenneth L. Black	Box 226, Hagerman	83332	837-4572
234 Jt.	Bliss	T. R. Flores	Bliss	83314	352-4422

COUNTY & DISTRICT	SCHOOL	SUPERINTENDENT	ADDRESS	ZIP	PHONE
IDAHO					
241 Jt.	Grangeville	William Eimers	P.O. Box 271, Grangeville	83530	983-0990
242 Jt.	Cottonwood	Jerry R. Pelton	P.O. Box 158, Cottonwood	83522	962-3971
JEFFERSON					
251 Jt.	Jefferson Co.	Virgil Powell	201 Idaho Ave., Rigby	83442	745-6693
252 Jt.	Ririe	Thales L. Johnson	Box 500, Ririe	83443	538-7482
JEROME					
261 Jt.	Jerome	Percy Christensen	P.O. Box 48, Jerome	83338	324-2392
262	Valley	Arlyn R. Bodily	Rt. 1, Hazelton	83335	829-5333
KOOTENAI					
[illegible]	Coeur d'Alene	Barry L. Stein	311 N. 10th, Coeur d'Alene	83814	664-8241
272	Lakeland	Richard D. Snook	P.O. Box 96, Rathdrum	83858	687-0431
273	Post Falls	Robert H. Leonard	P.O. Box 40, Post Falls	83854	773-5213
274	Kootenai	R. Dee Merrill	Rt. 1, Box 25, Harrison	83833	689-3631
275	Worley	Katherine H. Parkinson	P.O. Box 98, Worley	83876	686-1216
LATAH					
281	Moscow	James R. Hoyt	P.O. Box 8459, Moscow	83843	882-1120
282 Jt.	Genesee	Philip Stanley	Box 98, Genesee	83832	285-1162
283 Jt.	Kendrick	Richard H. Morton	Rt. 2, Box 6, Kendrick	83537	289-4211
284	Whitepine	John E. Grove	Box 278, Troy	83871	835-2751
285	Potlatch	Edward L. Davis	Box 518, Potlatch	83855	875-2411
LEMHI					
291	Salmon	Stanley L. Bippus	Box 790, Salmon	83467	756-4271
292	South Lemhi	Neuman K. Matson	Box 119, Leadore	83464	765-2441
LEWIS					
302 Jt.	Nezperce	Gary C. Greseth	P.O. Box 278, Nezperce	83543	937-3551
304 Jt.	Kamiah	Jerry Currin	Box 877, Kamiah	83536	935-2391
305 Jt.	Highland	James L. McPherson	Box 127, Craigmont	83523	924-5211
LINCOLN					
312 Jt.	Shoshone	Kenneth D. Crothers	P.O. Box 20, Shoshone	83352	886-2338
314	Dietrich	Wayne Perron	P.O. Box 428, Dietrich	83324	544-2153
316	Richfield	Craig R. Hall	Box E, Richfield	83349	487-2790
MADISON					
321	Madison	Jean H. Waite	30 N. 1st West, Rexburg	83440	356-5423
322 Jt.	Sugar-Salem	Tom D. Kershaw	Box 239, Sugar City	83448	356-9351
MINIDOKA					
331 Jt.	Minidoka Co.	Wayne B. Fagg	633 Fremont Ave., Rupert	83350	436-4727
NEZ PERCE					
1 Ind.	Lewiston	Andrew L. Smith	3317 12th St., Lewiston	83501	746-2337
341	Lapwai	Jeff Wilson	Lapwai	83540	843-2522
342 Jt.	Culdesac	George H. Hinds	Culdesac	83524	843-5413
ONEIDA					
351	Oneida Co.	Howard A. May	250 W. 400 N., Malad City	83252	766-2255
OWYHEE					
363 Jt.	Marsing	Loren Schmitt	Box 340, Marsing	83639	896-4111
365 Jt.	Bruneau-Gr.View	Dennis E. Brandon	Rt. 3, Box 184A, Bruneau	83604	834-2253
370 Jt.	Homedale	Deward Bell	Box 187, Homedale	83628	337-4612
PAYETTE					
371 Jt.	Payette	James E. Fisher	Box 349, Payette	83661	642-2262
372	New Plymouth	Clark Gardner	Box 388, New Plymouth	83655	278-5740
373	Fruitland	Ben L. Kerfoot	Box 387, Fruitland	83619	452-4411
POWER					
381 Jt.	American Falls	Daniel L. Whitacre	827 Fort Hall Ave,Am.Falls	83211	226-5173
382	Rockland	Paul W. Wilford	Box 119, Rockland	83271	548-2231
SHOSHONE					
391 Jt.	Kellogg	Leslie A. Larsen	800 Bunker Ave., Kellogg	83837	784-1348
392	Mullan	Robert M. Donohue	Box 71, Mullan	83846	744-1118
393	Wallace	Otto Iszler	P.O. Box 500, Wallace	83873	753-4515
394	Avery	Lorenzo J. Lanter	Box 77, Avery	83802	245-2479
TETON					
401	Teton Co.	Grant L. Wilson	P.O. Box 128, Tetonia	83452	456-2287
TWIN FALLS					
411	Twin Falls	James D. Sawin	201 Main Ave.W.,Twin Falls	83301	733-6900
412 Jt.	Buhl	Robert J. Pratt	216 N. 7th, Buhl	83316	543-6122
413	Filer	Ray G. Baker	Box X, Filer	83323	326-5771
414	Kimberly	Vernon Exner	Box O, Kimberly	83341	423-4170
415	Hansen	Garth G. Miller	Box 151, Hansen	83334	423-5593
417	Castleford	Edward P. Schenk	Castleford	83321	537-6511
418 Jt.	Murtaugh	Florin H. Hulse	Box 117, Murtaugh	83344	432-5451
VALLEY					
421	McCall-Donnelly	J. Serve Wilson	P.O. Box 967, McCall	83638	634-2161
422	Cascade	Eugene J. Novotny	P.O. Box 291, Cascade	83611	382-4227
WASHINGTON					
431	Weiser	Tom Falash	925 Pioneer Rd., Weiser	83672	549-0516
432 Jt.	Cambridge	Ric[illegible]ard W. Peters	Box 38, Cambridge	83610	257-3311